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EAST EUROPEAN ECONOMIES: SLOW GROWTH IN THE 1980'S

VOLUME 3. COUNTRY STUDIES ON EASTERN EUROPE AND YUGOSLAVIA

SELECTED PAPERS

SUBMITTED TO THE

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LETTER OF TRANSMITTAL

FEBRUARY 27, 1986.

To the Members of the Joint Economic Committee:

Transmitted herewith for use by the Joint Economic Committee, Congress, and the interested public is a study consisting of a compilation of papers assessing the individual economies of countries of East Europe entitled "East European Economies: Slow Growth in the 1980's, Volume 3—Country Studies on Eastern Europe and Yugoslavia." This compilation, together with volumes 1 and 2, completes the present series concerning East Europe, and forms a part of the committee's continuing effort to monitor economic trends in the Communist countries.

Volume 3 contains country studies for each of the individual members of the Council for Mutual Economic Assistance, plus Yugoslavia. The studies review economic performance and pay special attention to developments and problems in East Germany, Hungary, Poland, and Yugoslavia.

We are grateful to the Congressional Research Service of the Library of Congress for making available the services of John P. Hardt to help plan the study. Dr. Hardt and Richard F. Kaufman of the committee staff coordinated and directed the project and edited the present volume. Dr. Hardt was assisted by Donna L. Gold of the Library staff. We are also grateful to the many government and private specialists who contributed papers to the study.

It should be understood that the views contained in the volume are those of the authors and not necessarily those of the Joint Economic Committee or of individual members.

Sincerely,

DAVID R. OBEY,
Chairman, Joint Economic Committee.

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HIGHLIGHTS

By John P. Hardt

I. RANGE OF PERFORMANCE AND POLICIES

During the 1970s the CMEA-Six and Yugoslavia [1] all followed an economic growth strategy aimed at increased modernization and consumerism with varying degrees of success. This strategy included reliance on cheap and abundant supplies of oil and gas from the U.S.S.R., favorable credit terms from the West and a domestic policy of ensuring consumer satisfaction, often through substantial subsidies. In the 1980's most economies slowed down, but for some less was better. Their cost of output went down, due in part to energy conservation, and the quality of goods and services went up toward world market standards.

TABLE 1.—ECONOMIC INDICATORS, 1984

	1984		
	NMP	Industry	Agriculture
CMEA—Six and Yugoslavia	2.5	3.8	4.8
Bulgaria	2.5	2.5	5.1
Czechoslovakia	2.0	2.0	.9
GDR	2.5	4.5	7.5
Hungary	.5	6.0	4.2
Poland	3.0	4.6	1.2
Romania	3.5	4.1	9.9
Yugoslavia	2.1	3.2	.1

As Table 1 above illustrates, performance throughout the region was uneven. Moreover, the quantitative performance provided in several cases an inverse impression of the quality of recent performance: Economic growth appeared impressive in Poland only in the context of recovery from a precipitious earlier slow down; Romanian growth was less impressive than data indicated due to quality of data that masked extreme shortages in energy and food. On the other hand, Hungarian growth was far better than statistical indications due to the higher quality of output and consistency of performance over recent years. Hungary also had the best record in conservation of imported Soviet energy.

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[1] The Council for Mutual Economic Assistance is an economic alliance consisting of U.S.S.R., Bulgaria, Czechoslovakia, German Democratic Republic, Poland, Hungary, Romania, Mongolia, Cuba, and Vietnam. The East European members are often referred to as the CMEA-Six. Although Yugoslavia is not a full member of CMEA and is located in Southern rather than Eastern Europe, most of the general comments in these Highlights refer to Yugoslavia as well as the CMEA-Six.

Variations in individual country performance in the past and future decades may be explained by a number of factors:

- *Economic relations with the U.S.S.R.*, including supply and prices for energy and burden of Warsaw Pact commitments for military and foreign aid programs.
- *Economic relations with the West*, including terms of trade, industrial cooperation, availability of credit and non-trade transactions.
- *Improvement in planning and management mechanisms*, including the success of incentives for improved factor productivity designed to reduce imports and to improve the quality of outputs.
- *Strategy of economic development*, including the relationship between the structure of domestic output, the opportunities presented by the external market and the effective demands of the populace.
- *External factors*, including world market factors, weather and other external factors that influenced domestic CMEA performance but were outside the control of East European decisionmakers.

The Soviet strategy toward the CMEA countries included counsel to grow slowly if necessary in order to improve efficiency, especially in energy usage, and to raise quality of output to improve deliveries to the U.S.S.R. Ideally, Soviet advice was that CMEA energy use should approximate more efficient Common Market standards—roughly half that of CMEA—and goods produced should become dominantly "hard goods," i.e., saleable for convertible currency, and exportable to the U.S.S.R. Western countries, especially interested in the payment of debts also counselled increased quality of output. During the Seventies, the overall economic performance of Eastern Europe was probably the most impressive since the introduction of socialism into the region: not only was quantitative growth high, but there was also improvement in the quality of goods produced and supplement to the citizens. Both the rate of investment and consumption exceeded the overall growth of production, made possible by an import driven growth policy.

East European leaders were able to deliver on a tacit economic social contract with their populace—rising incomes and modernization in return for support or at least acceptance of the systems and regimes. This past growth of supply was buoyed by increased imports financed by favorable credit arrangements from the West and comparatively cheap energy imports from the U.S.S.R. In addition, the East European regimes subsidized consumption programs to elicit popular political and economic support by raising living standards. These policies brought political stability throughout the 1970s from Gdansk in 1970 to Solidarity in 1980.

Each of the CMEA-Six countries and Yugoslavia now faces a future not of rapid economic growth but stringencies. Difficult economic decisions will have to be made on how to allocate the slowly growing supply of resources among pressing claimants. Consumer demand may be especially difficult to meet, despite the need for rising per capita consumption to provide incentives and ensure political stability. Austerity may be both a necessary and a painful policy of allocative choice, i.e., distributing the shortfalls among politically approved claimants.

This transition from rapid growth to economic stringency and austerity in Eastern Europe from country to country poses serious but different dilemmas for all actors concerned. Some of the differences have to do with natural resources, others are due to policy constraints in individual countries. The bilateral issues with the United States also are different by country. Each country will be summarized briefly below as prospectuses for U.S. policy makers.

II. INDIVIDUAL COUNTRIES

German Democratic Republic

RESOURCE ENDOWMENT

Natural Resources: Limited land area (41,535 sq. miles)[2] was reduced by World War II settlements, e.g., Silesian coal fields ceded to Poland with Baltic ports, e.g., Gdansk [formerly Danzig]. Energy deficient particularly in oil and gas, indigenous brown coal with low calorific content and highly polluting.

Population: 16.7 million, less than pre-World War II population for comparable area. The drain of skilled workers and professionals to West Germany provided the economic rationale for the erection of the Wall in 1961. Skilled labor, although scarce, still provides GDR a comparative advantage.

Capital Stock: Recently updated plant and equipment to save energy, metals and labor, but still not generally up to world standards.

ECONOMIC PERFORMANCE AND CONSTRAINTS

Maintains the highest per capita income in CMEA.

Largest CMEA exporter to West and East of manufactured goods, primarily to FRG and Soviet Union. In recent years has expanded trade in West and East.

Growth rates have been sufficient to meet domestic and foreign obligations, but have suffered by comparison with FRG economic performance in living standards.

PERFORMANCE POTENTIAL

Closer inter-German and Western relations may provide increased quality of growth in manufactures. De facto membership in Common Market and other economic benefits from FRG provide unique advantage.

Improved technical efficiency and management will increase competitiveness on the world market, especially by using their own coal energy base.

Emphasis of U.S.S.R. on world level technology may facilitate better terms of trade with U.S.S.R. and greater economic maneuver room for Western relations, e.g., in micro electronics industry.

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[2] Federal Republic of Germany, 94,914 sq. miles.

COMMERCIAL RELATIONS WITH UNITED STATES AND THE WEST

Significantly increased trade with the West since Western recognition of GDR in early 1970's.

Most Western countries have "normal" (tariff and credit preferences) trade with GDR. Canada was the last major Western country outside the U.S. to grant the GDR MFN when trade agreement and long-term grain agreement were signed in 1983.

U.S. POLICY CONSIDERATIONS WITH THE GDR

1. Will the GDR continue to diversify its trade with the West, including the United States or rely primarily on "intra" German trade?
2. What is the value of "intra" German trade in the political coin? For the GDR? For the FRG? For the U.S.S.R.? For the U.S.A.?
3. Has German "technocratic" reform emphasizing technical efficiency and professionalism gone as far as it is likely to go in improving performance?
4. What are the prospects for a U.S.-GDR trade agreement, including extension of MFN and government credits? Are modest steps in trade facilitation short of a trade agreement possible?

Poland

RESOURCE ENDOWMENT

Natural Resources: The largest East European country at 120,000 square miles. Agricultural land is excellent for most grains and potatoes; good animal husbandry potential. Capable of being self-sufficient and a major exporter in agricultural goods, but still a net importer. Material reserves in coal, copper, iron ore, silver and sulphur—all world standard.

Population: 37.4 million—largest in East Europe. Large, adequate labor force; skilled engineers and workers.

Capital Stock: Aging factories, new industrial complexes started during the boom of the 1970's short on parts, many incomplete.

ECONOMIC PERFORMANCE AND CONSTRAINTS

Significant improvement in overall growth, per capita incomes—especially meat consumption per capita, and exports in early 1970's. In the late 1970's and early 1980's, experienced the sharpest peacetime decline in performance of an industrialized country since the World Depression of the 1930's.

Import led growth contributed to an enormous debt buildup—debt service ratio exceeded hard-currency income by 1981, i.e., 100 percent of convertible currency earnings went to servicing the foreign debt.

PERFORMANCE POTENTIAL

Service of foreign debt will require long-term *net* transfer of resources out of Poland even with new loans.

Soviet Union has not accepted role of "debtor of last resort," with Poland's Western creditors nor has U.S.S.R. provided substantial aid. Still the Soviet Union has not fully used its economic leverage to force increased exports to the U.S.S.R. and has not accelerated repayment of debts.

In the late 1970's world market for most Polish exports became "soft," e.g., low prices for copper, sulphur, coal in convertible currency market.

Subsidies on food still heavy and onerous. Characteristically 50% inflationary "overhang" continuous, i.e., twice as many Polish Zlotys chasing goods than value of goods available in the domestic market. Return to 1978 levels in GNP, GNP per capita, agricultural output per capita may not occur until after 1990 under the optimistic official scenario.

Although currently growing, rates of improvement in production, investment and consumer goods output retarding, incomes and money supply increases raise inflationary pressure and foreign trade not expanding.

COMMERCIAL RELATIONS WITH UNITED STATES AND THE WEST

Danger of formal default has receded, but rescheduling of debt and servicing of debt without new loans will be very difficult for years ahead. Admission to IMF/World Bank in 1986 will not result in further funds until there are programs approved by the IMF and World Bank. Then several billion dollars in new hard currency is possible, but credits will be conditioned on acceptance of program likely to result in improvement of the economy. Resumption of MFN, U.S. government loans, resumption of bilateral U.S.-Polish exchanges, are all tied to political normalization between Washington and Warsaw.

U.S. POLICY CONSIDERATIONS WITH POLAND

1. What are the political prospects for normalization of relations between the U.S. and Poland, including restoration of MFN and government credits?
2. How does the leadership view the tradeoff between servicing of Western debt and decline of living standards?
3. Will Polish leaders accept the requirements of an IMF program of domestic austerity, investment rationalization, and shared management?
4. Is the U.S. support of the private agricultural fund supported by the Vatican and Rockefeller Fund a forerunner of U.S.-Polish normalization?
5. What are the prospects for economic reform with or without normalization? Is there a connection between economic reform and political liberalization?
6. Poland until Martial Law in 1981 had been the most favored of the CMEA-Six in U.S. commercial policy: MFN and government credits were not conditioned on waiver of the Jackson-Vanik amendment. Would Poland, if U.S.-Polish normalization occurred, return to the traditional favored position with the United States?
7. Polish leaders under martial law have blamed their poor performance and slow recovery on Western, especially U.S., sanctions and trade restrictions. How valid are these claims?

XII

Czechoslovakia

RESOURCE ENDOWMENT

Natural Resources: Material resource base is very limited in 49,366 square mile area. Low grade coal is the only energy resource; little marketable non-energy resources.

Population: 15.7 million. Labor force and engineering professionals are skilled but not necessarily competitive by world standards.

Capital Stock: Technical level of industrial plants—once leading by world standards—is now aging, obsolete and non-competitive.

ECONOMIC PERFORMANCE AND CONSTRAINTS

The good performance of 1970's has not continued. Czechoslovakia experienced negative growth in early 1980's as they did in early 1960's. Importation of food and materials is likely to continue. Modernization of industry was set back by draconian cutbacks in imports to assure low Western debt. Second highest standard of living in Eastern Europe due to emphasis on consumption. Current regime has favored economically backward Slovakia over Czech lands of Bohemia and Moravia. Efforts to shift industry from energy to labor intensity slow. Poor weather has recently impeded construction.

PERFORMANCE POTENTIAL

A surge of investment is needed to modernize aging plants, replace obsolete equipment and regain long-term competitiveness in world market. New Soviet gas pipeline transit fees and reliance on atomic electric power may relieve energy deficiencies and reduce industries' energy constraint within the economy. However, modernization of manufacturing, including improved planning and management keyed to incentives and quality of output, may not be possible under the current conservative economic leadership.

COMMERCIAL RELATIONS WITH THE UNITED STATES AND THE WEST

Western trade and connections avoided with post-Soviet invasion CMEA-centered autarchic foreign trade policy. Settlement of major outstanding impediments to the U.S.-Czech trade—gold claims—did not lead to expanded trade. Import reductions severely set back domestic growth plans. Opening to the United States and the West may await initiative from Moscow, if U.S.-Soviet relations warm.

U.S. POLICY CONSIDERATIONS WITH CZECHOSLOVAKIA

1. Domestic economic growth has been slow in Czechoslovakia. Although growth in 1983–84 represented recovery from very poor performance in 1981–82, it is close to the poorest record in CMEA. Why has this historically advanced, dynamic economy performed so poorly?

2. Trade with East and West has been relatively balanced, and the hard currency debt low. Has the draconian import restriction program traded short-term trade balances for long-term growth?

3. Under Husak—a Slovak—regional development priorities have shifted from the advanced Czech lands (Bohemia and Moravia) to less developed Slovakia. Is this development policy rational?

4. Since settlement of the Czech gold issue in 1981, negotiated under the Trade Act of 1974, U.S.-Czech trade has not increased as expected. Why not? Would a political rapproachment between Prague and Washington be a sufficient condition for trade expansion?

5. Exchanges in science, culture, and tourism have been discussed for years, as have civil aviation agreements. What is the progress on concluding those agreements?

6. Czechoslovakia was an original member of many of the international commercial and financial institutions—GATT, etc. When will Czechoslovakia rejoin these foundation organizations?

7. Are there beneficial lessons to be drawn by Czechoslovakia from the People's Republic of China, Hungarian and German Democratic Republic's economic experiments of the last few years? Are Czechoslovakia and other CMEA countries likely to adopt elements of these programs or must impetus toward reforms, as in the past, start in Moscow?

Hungary

RESOURCE ENDOWMENT

Natural Resources: Tilled agricultural land is fertile in a 39,502 square mile area. Material resource endowments—energy and other raw materials—are limited.

Population: 10.8 million. Slow growth in labor force especially skilled labor, heightens the need for improvement in labor productivity. Good educational base for engineering and skilled labor.

Capital Stock: Modernization of agricultural economy and selective industrial sectors makes some enterprises competitive in world market, e.g., Icarus buses.

ECONOMIC PERFORMANCE AND CONSTRAINTS

Slow growth, improvement in factor productivity and quality of output, and expanded exports to the West are the stated policy goals. As a result, slow growth has not led to increased personal income. Differential payments from incentive systems and absence of subsidies have led to payment for performance of labor force and fluctuating real income. Hungarian currency (forint) is stable and close to convertible. Although the Soviets thus far have accepted the apparent tradeoff between broader political participation and the New Economic Mechanism (NEM), differentiation policy within the bloc has its limits. Austerity from a low growth policy is difficult politically as a long-term policy. Low growth, however, has facilitated improvement in factor productivity—Hungary is the most efficient economy in CMEA.

PERFORMANCE POTENTIAL

Further improvements in their incentive system attempt to balance the political necessity for full employment and production with the stated goal of paying unprofitable enterprises less or letting them fail (bankruptcy). Adequate trade and economic prospects turn on openness to world market developments, e.g., OECD growth, interest rates, oil prices. Favorable trade relations with the U.S.S.R. are also vital for a country with about half its output directed toward foreign trade. Limited convertible currency balances have been a key current constraint on domestic growth through limiting imports.

COMMERCIAL RELATIONS WITH UNITED STATES AND THE WEST

Hungary has successfully specialized in many areas in which it has developed comparative advantages in the world market. But many areas dependent on the world market have suffered from Western business cycles, e.g., agricultural equipment. Over half of Hungary's exports are agricultural.

With the conclusion of the trade agreement with United States (MFN and credits) in 1978 all major outstanding issues in U.S.-Hungarian trade were resolved. Austrian-Hungarian relations across the most open border between East and West represent the maximum in system openness within CMEA.

U.S. POLICY CONSIDERATIONS WITH HUNGARY

1. Since the return of the Hungarian national treasure, the Crown of St. Stephen's and signing of U.S.-Hungarian Trade Agreement [providing MFN and government credits], bilateral trade has expanded, but why so modestly?
2. Hungary and the United States share concern about Common Market agricultural policy. Could we develop parallel agricultural policies?
3. Hungarian economic growth has been slow in recent years. Although 1984 performance was a recovery over the 1983 recession, 1985 performance has been unimpressive. Why?
4. Slow growth and increasing debt put Hungary in danger of debt rescheduling in 1983–84. Was joining the IMF-World Bank with availability of their funds the crucial margin of hard, convertible currency solvency for Hungary in recent years, i.e., the reason they avoided debt default?
5. At the 1984 meeting of the Hungarian Central Committee, the NEM economic program was reaffirmed but major restructuring of the economy has not yet followed. What is the timetable for the next phases of the NEM? The New Economic Mechanism (NEM) is said to be going into a phase where enterprise bankruptcy is possible. Is this true? What does it mean? Are other changes involving political reform in the offing?
6. Andropov favored diversity in the economies of East Europe. Gorbachev has not been as clear in his statements on this differentiation policy, i.e., each East European country could vary its system consonant with its historical, ethnic and other differences in heritage. Has there been some reaffirmation of the earlier Soviet policy of diversity, or has the Soviet stance on CMEA integration reflected movement in the opposite direction? Some say the CMEA Summit of 1984 dictated more integration, others more Western trade and less reliance on the Soviet energy subsidy. Who is right for Hungary?

XV

Romania

RESOURCE ENDOWMENT

Natural Resources: Agricultural land available for cultivation extensive and fertile enough for expanded output in 91,700 square mile area. Proven oil reserves have declined. Although Black Sea oil exploration may prove to be rewarding, current reliance on domestic coal, hydro, atomic electric power.

Population: 23.0 million. Large agricultural labor force with low productivity. Population growth is sufficient to meet manpower needs. Limited skilled labor force and engineering pool.

Capital Stock: Structure of development keyed to energy intensive development strategy that is now inappropriate will fall in oil output and increases in energy import prices. Delayed development of industrial base in steel and other basic sectors using Western technology makes plant and equipment more modern and competitive than some CMEA neighbors.

ECONOMIC PERFORMANCE AND CONSTRAINTS

From the significant industrial growth of the 1960's and 1970's, Romania has fallen off badly. Growth figures continue to exaggerate performance especially in view of poor record in consumer areas, especially food and energy supplies to the population. Current program of energy independence is keyed to more effective use of oil and gas and increased nuclear power has been lagging badly. Industrial strategy emphasizing energy-intensive sectors has been badly overtaken by costly import requirements and the relative disadvantages of petroleum-centered Romanian strategy. Supplies from the Soviet Union and OPEC are difficult to finance. A sharp increase in energy dependence on the U.S.S.R. came with oil import increases in 1985 and projected gas supplies for Siberia by 1990. Draconian cutback on imports for industrial development avoided insolvency in Western market but cutbacks led to imbalances in domestic programs. Stated policy against further Western loans was abandoned in 1985. Lack of consumer incentives, highly centralized planning and management constrain progress toward improved quality of performance.

PERFORMANCE POTENTIAL

A shift toward agriculture seems necessary and desirable for consumer incentives and export expansion; a shift away from energy intensive growth would permit movement toward stated policy of energy independence. However, the present leadership's predilection for a highly centralized industrial oriented strategy seems likely to assure unchanged economic strategy and continued stagnation. Single person rule (Ceausescu) and frequent political intervention in economic management constrains development of constructive plans and effective management.

COMMERCIAL RELATIONS WITH UNITED STATES AND THE WEST

Trade with the West based on exports of oil and corn is no longer possible. The trade agreement with United States has led to relative increase in trade, but continuing annual concerns on human rights record make long-term stability of bilateral trade questionable.

U.S. POLICY CONSIDERATIONS WITH ROMANIA

1. How does Romanian domestic record on adherence to Helsinki agreement criterion and foreign policy square with U.S. criteria of differentiation based on bilateral policies of East European countries? How far reaching is the coincidence of our national interests and policies? Often over the years serious consideration has been given to denying the waiver under the Jackson-Vanik amendment. Has the Romanian human rights record justified the annual waiver and has it improved over time?
2. Romania has been the recipient of U.S. trade and credit benefits for a decade since our Trade Agreement. How does the United States assess the net benefits?
3. Romania has been a member of the International Monetary Fund and the World Bank for a decade. Have they moved closer to conformance with the criterion of these global institutions and benefitted from memership? Has the Romanian record in the IMF/World Bank corresponded with the shared interest the United States has in these foundation organizations?
4. Will increasing Romanian reliance on Soviet oil and gas remove the economic basis of past foreign policy independence from the Soviet Union and make Romanian foreign policy positions move away from some commonality with the United States toward conformity with Moscow?
5. Romania's extensive growth, energy intensive strategy of the 1970's has proved inappropriate for the 1980's. Their lack of reform and continued low priority to consumer goods availability places them at odds with the policies of other CMEA countries. Should the United States attempt to influence the Romanian industrial strategy and encourage economic reform? Should this be a focal point in our differentiation policy toward Romania?

Bulgaria

RESOURCE ENDOWMENT

Natural Resources: Fertile land and sun favor garden crops, fruit, vegetable, and tobacco. In land area of 42,796 square miles. Deficient in energy and other materials.

Population: 4.9 million. Labor supply adequate but constrained by skilled labor and engineering deficiencies.

Capital Stock: Improved agricultural technology, otherwise dependent on USSR. Limited capital stock especially in energy supplies keyed to Soviet economy.

ECONOMIC PERFORMANCE AND CONSTRAINTS

Economic growth continued throughout the 1970's due to emphasis on agricultural trade, favorable terms of trade with U.S.S.R. and improved efficiency in agriculture through the introduction of a New Economic Mechanism [NEM]. Agricultural development of processed food, including wine and tobacco has been successful.

Most dependent of CMEA countries on economic relations with U.S.S.R. Recent poor weather slowed construction accentuating shortfalls in energy and consumer goods.

PERFORMANCE POTENTIAL

Continued emphasis on agriculture and expanded tourism. Leadership more tied to Soviet policy than other CMEA countries. Recent Soviet complaints of quality of Bulgarian exports and progress on economic reform indicates Gorbachev is reexamining preferential policy toward Bulgaria. Moderate, selective reform under longest ruling head in East Europe indicates flexibility not necessarily tied to succession.

COMMERCIAL RELATIONS WITH UNITED STATES AND THE WEST

Avoidance of Western debt burden has been facilitated by a preferential Soviet policy that has permitted Bulgarian export of refined petroleum products from Soviet oil imports. Selected agricultural cooperative ventures with the West have likewise helped in special Bulgarian NEM. Future increases in Western commercial relations raise prospects for increased debt burden.

U.S. POLICY CONSIDERATIONS WITH BULGARIA

1. Prospects for U.S.-Bulgarian trade agreement appear currently clouded by unsettled questions over possible Bulgarian esponiage and intelligence operations abroad, including whether Sofia had a role in the abortive attempt on the life of the Pope. The human rights record of Bulgaria has never received high marks by Helsinki agreement standards. What would be the changes in Bulgarian domestic and foreign policy activities that would permit serious consideration of normalized relations and trade?
2. Bulgarian economic strategy and reform have provided some expansion in commercial relations with the West. Debt burdens have been avoided and growth rates have been above average. What might be the structure of U.S.-Bulgarian economic relations were they normalized?
3. A less preferential Soviet economic policy toward Bulgaria—less oil at higher prices—and a possible increase in Western economic ties may be coordinated with domestic liberalization and some foreign policy independence. Is a Western tilt and putative Bulgarian NEM a basis for some revision in United States policy toward Bulgaria?

Yugoslavia

RESOURCE ENDOWMENT

Natural Resources: Land area of 98,725 square miles is endowed with excellent arable land for wheat and other crops. A variety of material resources but not abundant energy reserves.

Population: 23.2 million. Labor force is more than ample; large and continuous unemployment makes Yugoslavia only CMEA related country with excess labor. Skilled labor and engineering capability is unevenly divided among republics.

Capital Stock: Uneven development of large resource reserves and export oriented projects have left Yugoslavia with substantial but often noncompetitive plant and equipment, by world standards.

ECONOMIC PERFORMANCE AND CONSTRAINTS

Experienced moderate growth in 1984, but recurrent growth cycles have in the past been aggravated by reliance on external factors: trade with East and West, remittance from foreign workers, tourism. Inflation at home due to subsidization of consumption and import cycles has frequently created instability. In 1985 retail prices soared (almost 75% increase in first half of year) and basic foodstuff prices rose sharply.

PERFORMANCE POTENTIAL

Prospects appear uneven among the constituent republics. The economy remains burdened by twin expensive "safety nets" (social programs and regional development efforts) and inappropriate industrial growth strategies centered on resource development and heavy industry. More attention might be given to the agricultural development and integrated national development rather than republic output and financial planning and management. The strong central political leadership needed for national economic development weakened since the death of Tito. Economic benefits of growth so essential for political cohesion and stability reduced further by a general decline in European Community economic performances. External balancing factors such as remittances of Yugoslavia workers abroad and tourism income have thus been weakened.

COMMERCIAL RELATIONS WITH UNITED STATES AND THE WEST

Long-term relationship economic and political with both East and West continues. A normalized trade and aid relationship, including military aid from the United States has been longstanding. Recent debt burden led to heavy reliance on IMF and Western financing—especially by American banks. IMF management of Yugoslavia's financial relief program has made the international banking institution a major player in Yugoslavia's economic policy making. Yugoslavia has been the most preferred by the United States of economies associated with the CMEA.

U.S. POLICY CONSIDERATIONS WITH YUGOSLAVIA

1. The United States and Yugoslavia have had normal relations since the mid-1950's. Independence of Soviet domination and reform in the economy which gave more voice to workers have been among the reasons for this differentiation policy of the United States. Not only trade and credit benefits but military aid and sales have been provided. How does this thirty-year record look in terms of the net benefits to each side.

2. Yugoslavia has taken some steps to improve their foreign credit solvency position under guidance of the IMF, American bankers and others. Are the necessary steps for improvement in

their commercial and credit position being taken by the Yugoslavian authorities?

3. Periodically, Yugoslavian leaders have introduced economic reforms designed to improve domestic and foreign economic performance. The most recent has been the official Yugoslavian Kraiger Commission, which called for many changes that reflect principles long supported within professional economic circles in Yugoslavia as well as among Western economists. Why has there been such limited success in applying the economically rational principles of the Kraiger Commission? What influence should or could the United States have in encouraging effective reform in Yugoslavia?

III. East-West Policy and Impact on Individual Country Performance

There are three major alternative external environments that will impact on the domestic and foreign economic performance of the CMEA-Six and Yugoslavia:

- A confrontational and trade restrictive East-West environment possibly reinforced by slow growth and protectionist policies.
- A mixed East-West environment with confrontational and restrictive U.S.-Soviet relations and a cooperative and trade facilitating East and West European environment.
- A cooperative and trade facilitating East-West environment possibly reinforced by more regional and global growth and increasing openness of economies of East and West.

The first scenario would have the most negative, the third, the most positive impact on the economic performances of the East and South European economies. To be sure domestic performance influenced by judicious choice of economic strategies and effective changes in planning and management systems will have material effect on each individual country's economic performance. Likewise, the growth stimulating or retarding effect of Soviet commercial relations with its CMEA partners and Yugoslovia is a key factor in future performance. However, largely beyond control of these countries in Europe are the alternative external environments that will be, to a large extent, determined by the respective superpower relations.

ALBANIA

ALBANIA UNDER AND AFTER ENVER HOXHA*

By Michael Kaser**

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I. CONTROL FROM ABOVE

The 1984 May Day procession in Tirana gave Stalin's portrait equal prominence with those of Marx, Engels and Lenin and its theme was "Steel Unity around the Party and Comrade Enver." [1] Stalin was absent from any published photograph or newspaper report of the 1985 commemoration, but Hoxha, who had died on April 11, was ubiquitous in print and picture. Before that death the Albanian Party of Labour had claimed to lead:

> The persistent struggle against manifestations of bureaucracy, technocracy and liberalism, against the power of conformism and against narrowly sectoral, local or ministerial outlooks. The Leninist style of work, taught by Stalin, is the remedy against indolence, routine ways, conservatism and servility, and is the invigorating force to enliven the thinking which pushes all before it and which opens our our perspective.[2]

Hoxha's chosen successor, Ramiz Alia,[3] has moderated the rhetoric and offered consumer goods as well as words to his citizenry.

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*This is the revised text of a study published in German in Europäische Rundschau (Vienna) No. 1, 1985. It surveys the period since "Workers' Control" was launched in 1966 and draws details of planning and management procedures and statistics of economic performance from a wide range of Albanian books and periodicals not hitherto examined in Western publications. It concludes that Albania's economic isolation cannot long be maintained in its present form.

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[1] There is no evocation of stal (=steel) in the slogan (celik is steel in Albanian) but the phrase is Stalinesque.

[2] Probleme ekonomike, No. 1, 1984, p. 4.

[3] At 59, Alia is younger than Hoxha, who died at 76, but was associated with Hoxha throughout his career.

Hoxha's long affiliation of the Albanian Party of Labour to Stalin[4] can readily be explained in terms of political history, which by the same token is a sufficient condition for opposition to "liberalism". But the denunciation of "conservatism" is engendered by more recent events—the need to derive innovation and entrepreneurship from a conformist and egalitarian society into which come virtually no transnational stimuli. Economic reform is the sense in which it is discussed or implemented elsewhere in eastern Europe is not seemingly on Alia's agenda but demographic pressure compels better labour productivity or more trade if living standards are not to decline.

The same checks to the inward flow of information operate in the outward direction. It is thus very difficult for the external observer or short-stay visitor[5] to penetrate below the rhetoric of public figures or of the press in order to identify precise trends in economic organization. Economic preformance is presented in a highly selective form. The latest statistical abstract appeared in 1979 as 35 Years of Socialist Albania,[6] although another abstract was expected for the fortieth anniversary of liberation (that is, it should have come out in 1984); the sole updating is in the speeches of the Chairman of the State Planning Commission or of the Minister of Finance when the annual plan and budget is put to the National Assembly at the turn of each year.[7] There are a small number of books and journal articles on economic organization, but the party or government documentation on which they comment are generally unpublished. Thus the Plan Commission's journal regularly runs a section for articles discussing the latest Plenum of the Party Central Committee,[8] but what actually transpires at the Plenum is never published.[9]

The circumstances under which Albania reached its present isolation are well known. The leadership chose to side with Stalin in his rift with Tito in 1948 but aligned itself with China in the latter's rift with the USSR in 1961. The Sino-Albanian rift began in 1971 (crucially, though not exclusively, on Hoxha's opposition to Mao's invitation to President Nixon to visit China) and was complete by 1978. While Albania and China were allies, the phasing of policy changes were remarkably similar. In 1966 Mao's launch of the "Cultural Revolution" harnessed a virulent populism to his attack on those who were taking the "capitalist road"; Hoxha's more modest "Cultural Revolution" took the same tone in "Workers' Control":

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[4] The 104th Anniversary of his birth was widely celebrated: in the town still named after him, Qyteti Stalin, the theme of the commemorative meeting was "Stalin lives in our hearts" and in the capital "Stalin—resolute fighter against the opportunism and revisionism of every hue" (Zeri i popullit, 21 December 1983).

[5] The present writer has twice travelled in Albania (in June 1960 and in April 1983) and published a series of studies on its economy (the first being for the United Nations in the Economic Survey of Europe in 1960, Geneva, 1961, and the most recent in The Contemporary Review, August 1983).

[6] Tirana, 1981, 139 pp., an official translation of 35 vjet Shqiperi socialiste, Tirana, 1979, 161 pp. (hereafter 35 vjet. . . .).

[7] The speech of Qirjako Mihali, then Minister of Finance, provided eleven percentage increments over 1982 and three absolute magnitudes (grain yield, investment value and dwellings built) for 1983 (Zeri i popullit, 27 December 1983) and the Law on the 1984 Plan provided eight percentage increments over 1983 (ibid., 28 December 1983).

[8] The fifth Plenum (i.e. since the VIII Party Congress) had a section in Probleme ekonomike, No. 3, 1982, the Sixth in No.1, the Seventh in No. 4, 1983 and the Eighth in No. 1, 1984.

[9] Thus the communique on the Seventh and Eighth Plenums (respectively 20–21 September and 19–20 December 1983) merely state who spoke, not what they said or what decisions were taken.

> The efforts of some bureaucratic administrators to channel the control of workers' commissions into a bureaucratic framework according to "rules and regulations" only shows their fear of the masses' revolutionary momentum.[10]

Whereas, however, Mao was reckless of destruction—of the Communist Party and of the intelligentsia in particular—and relied on the Army, Hoxha fortified his section of the Party and battled against the Army and the Ministry of the Interior.

The demotions and eventual violent deaths of four ministers define the dates of policy changes and of probable challenges to Hoxha's supreme authority—Mehmet Shehu, Chairman of the Council of Ministers, Beqir Balluku, Minister of Defense, Koci Theodhosi, Minister of Mining and Industry, and Abdyl Kellezi, Chairman of the State Planning Commission. Theodhosi and Kellezi were dismissed in December 1966 when "workers' control" was introduced, but returned to office (in December 1968) for the reversion to a standard Soviet system (with somewhat more local-authority participation) in 1970. The reinstated ministers started to open up trade with the West while Balluku (notably during a visit to Beijing in November 1972) began to rebuild the political bridge with China. Balluku was dismissed in June 1974 and was soon after executed for treason and Theodhosi and Kellezi suffered the same fate in June 1975.[11] The successors to the economic portfolios immediately adopted the extreme policies of import substitution which endure to this day [12] while Shehu implemented a scheme of massive military defence in 1977.[13] Speaking at the Army Day celebrations in July that year Shehu declared that—

> United States imperialism and Soviet socio-revisionism are a source of danger of war, but there are other hegemonistic powers which are fanning the flames of war.[14]

China was the other "hegemonist" and bilateral relations, by then already poor, thenafter deteriorated, to culminate in the Chinese Note of 7 July 1978 terminating economic aid and the Albanian Party response of 29 July.

There is no evidence that Hoxha opposed Shehu's defensive scheme to defend against a putative aggressor every inch of Albanian territory: Balluku had been denounced for having plans to withdraw into the defensible mountains as a redoubt, leaving the coastal plains to immediate occupation. To that end vast supplies of ill-spared cement and large drafts of Albania's super-abundant manpower went into the construction of hive-shaped concrete pillboxes throughout the lowlands. In the last speech he made before his still-mysterious death, Shehu spoke at the VIII Party Congress of the five-year plan for 1981-5 as fulfilling—

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[10] Zeri i popullit, 22 February 1968, quoted by A. Schnytzer, "Stalinist Economic Strategy in Practice: the Case of Albania," Oxford, 1982, p. 41. The book is the standard work on the evolution of the Albanian economic system between 1945 and 1977.

[11] Balluku's "military putsch" and preparations for "abandoning the coast and the cities to imperialist aggressors, the patrons of Mehmet Shehu" was in 1973 according to Hoxha, The Titoites, Tirana, 1982, p. 620.

[12] For sources on, and the substance of, the controversy over trade dependence to early 1979, see the present author's "Albania's Self-chosen predicament", The World Today, June 1979, pp. 259–68. The leader of the opposition to Theodhosi was Adil Carcani, who is now Chairman of the Council of Ministers.

[13] Few details have ever emerged: the Central Committee met on 26–27 June 1977 "to debate defense" (the communique tersely reported that appropriate measures had been taken for the protection of the Fatherland).

[14] Zeri i popullit, 9 July 1977.

> in the field of defence . . . the duty to take all necessary measures to ensure its further and all-round strengthening and to enhance the fighting readiness of the entire armed people, so that our socialist Homeland can withstand and overcome any possible aggression from our imperialist and revisionist enemies.[15]

The Politburo met on 17 December 1981 with, reportedly, "Albania's opening to the world" on its agenda. The occasion proved to be a showdown between Hoxha and Shehu and that evening the latter was said to have committed suicide. Hoxha's account sees a conspiracy against him by the Prime Minister, Shehu, the Minister of the Interior, Fecor Shehu, the Minister of Defence, Kadri Hasbiu, and Shehu's wife Fiqret, and all soon were dead, save for Fiqret and her sons who are reportedly in prison.[16] Although some reports put Shehu as the proponent of wider external relations, Hoxha seems to have revised the strategy of defending every inch of territory after the execution of Kadri Hasbiu, for the small pillboxes appeared abandoned in 1983 (having cost some two per cent of net material product annually during 1977-81).[17] But in 1984, coinciding with the sharp rise in defense spending (Table 7 below), new larger pillboxes were being built!

Shehu had become the most senior leader after Hoxha by virtue of Hysni Kapo's death in September 1979, and both had adhered closely to Hoxha since they were guerrilla chiefs together in the Peza mountains in 1942. Hoxha chose Ramiz Alia, Chairman of the Presidium of the National Assembly (and hence Head of State), as his right-hand man.[18] But there was a notable difference in their publications for the 40th anniversary of liberation in November 1984. Hoxha, in the latest volume of his political memoir (the English texts of which exceed 4,600 pages!) spoke much of encirclement and blockade and of building Albania as a 'Socialist fortress'. Throughout his speech (published in booklet form) Alia only once mentioned encirclement and blockade and did not refer to any fortress: rather he spoke of 'good neigbourliness' as Albania's foreign policy.

II. AN ECONOMY IN ISOLATION

At the peak of the period of "self-reliance" a new Constitution was enacted (1976) which forbade the acceptance of any loan or credit from a capitalist source. In retrospect this saved Albania from the heavy hardcurrency indebtedness which now dogs its neighbour, Yugoslavia, and its former partners in Comecon, especially Poland and Romania. With low trade dependence and rigorously controlled domestic prices, external inflation has not touched the country. As Shehu proclaimed at the VII Party Congress (1981):

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[15] M. Shehu, Report on the 7th Five-year Plan (1981-1985), Tirana, 1981, p. 139.

[16] The covert account is mainly from the Yugoslav weekly, NIN. In The Titoities, op. cit. pp. 617-3, Hoxha says the Politburo criticized Shehu's acquiescence in the marriage of his son to the daughter of a family some of whose members were in emigration (the emigre named, Professor Arshi Pipa of the University of Minnesota, has told the present writer that he does not know which branch of his family was allegedly involved).

[17] This percentage is the difference (6 per cent of total investment) by which the increment in non-productive investment planned for 1981-5 falls short of that in 1976-80 (16 against 23 per cent), applied to the last known share of accumulation in net material product (36 per cent in 1971-75); see Shehu, op.cit., pp. 39 and 114 and "35 Years of Socialist Albania," op.cit., p. 117. On these developments see the present author's "Albania's Muscular Socialism", Contemporary Review, August 1983, pp. 89-94.

[18] Hoxha's personnel reshuffles also took a woman into the Politburo, Lenka Cuko; apart from Romania (where Mrs. Ceausescu is on the equivalent body), Albania is the only East European Party to have a woman on its Politburo. In the 1976 changes he brought a woman onto the Council of Ministers, with the Agriculture portfolio.

> Albania is the only country in the world without external or internal debts, without taxes, without inflation, without price rises and unemployment.[19]

The break with China eliminated 50 per cent of Albanian imports and, with borrowing prohibited, exports had to be mustered to make up some of the deficit in essential supplies: over the five years 1976–80 exports were 33 per cent higher than in 1971–5.[20] For four years (1979–82) Albania profited from the high world price for oil, but the OPEC price cut of March 1983 and the ensuing poor markets for hydrocarbons serverely affected Albanian export earnings. In the year 1983 a drought temporarily eliminated electricity exports (see below). In consequence as Table 1 shows, Albania has been depleting its accumulated credit balances in Western banks, and reached a nadir of $26 million in the Fall of 1984; it has only rarely borrowed from Western banks and then for sums much less than its assets. During 1984 Albania maintained a credit balance in its Western bank accounts, but the very strong import cutting campaign for 1984–5 suggests that the authorities have little realistic anticipation of an upward trend in export earnings.

Some Albanian exports are sold on spot markets (its oil regularly appears on the Rotterdam market) but in the main the Ministry of Foreign Trade conducts its dealings under bilateral trade agreements. As the procedures for the 1984 agreements show (in Table 2), those with Comecon members are concluded first and well before the start of the relevant year—the earlier probably being the most important (GDR, Czechoslovakia and Bulgaria) in order to have the scheduled deliveries and purchases incorporated in the partner's annual plan.

TABLE 1.—ALBANIAN ASSETS AND LIABILITIES WITH B.I.S. REPORTING BANKS

[Millions of U.S. dollars]

	Assets	Liabilities	Balance
December 1979	33		33
March 1980	43	8	35
June	56	7	49
September	63	1	62
December	68		68
March 1981	67	7	60
June	74	2	72
September	106		106
December	102	1	101
March 1982	88	2	86
June	98		98
September	83	7	76
December	88		88

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[19] Shehu, op. cit., p. 5.

[20] Both percentages from ibid., p. 44. Albania has not published trade returns since those for 1964 and China, when the present administration began to publish a statistical abstract (1982), omitted Albania from its trade listings.

TABLE 1.—ALBANIAN ASSETS AND LIABILITIES WITH B.I.S. REPORTING BANKS—Continued

[Millions of U.S. dollars]

	Assets	Liabilities	Balance
March 1983	68	....	68
June	45	4	41
September	45	1	44
December	51	2	49
March 1984	40	....	39
June	29	....	29
September	27	1	26
December	30	1	29

Source: Bank of International Settlements (BIS), International Banking Developments, Fourth Quarter 1983, Basle, April 1984 Tables 4 and 5, and BIS and Organization for Economic Cooperation and Development (OECD), Statistics on External Indebtedness, Basle and Parts, April 1984, Tables A and B, supplemented for 1981 by BIS, loc.cit., Second Quarter and Fourth Quarter 1981.

There has been no trade with the USSR for twenty years, but the only other Comecon member with which Albania has no agreement is Mongolia, for Cuba and Vietnam have an accord as well as the East European states. Some capitalist countries have bilateral trade agreements, normally concluded after the relevant year has begun, but significant trade takes place with states with which Albania still does not have diplomatic relations—the Federal Republic of Germany, the United Kingdom and the United States.

Table 2 marks with an asterisk those partners with trade agreements which do not themselves publish their imports from or exports to Albania. It is hence impossible to compile a comprehensive aggregate of Albanian trade from partner returns. What is evident from the Albanian press, however, is an enhanced drive for import saving, coupled, though less forcefully, with export promotion, under the slogan "Increase exports, reduce imports." [21] Typical of the publicity in favour of import substitution was the report of the Korce Knitwear combine in 1984 authorized to import sewing machines and spare parts for 400,000 valuta leks, but allowed only 200,000 ($28,000) valuta leks for 1985.[22] A visit by the present author to this plant in 1983 showed a wide variety in sourcing: one sewing machine, a Mauser "Spezial", dated from before the Second World War (when the plant occupied 300 workers on blouse and shirt-making—against 3000 workers now), and others came from China, the GDR and Italy. Although it was said that all spares are being manufactured in the Combine's own workshop, the Combine's capacity must be severely hit if imports are seriously constrained.[23] A realization of this limit could be seen in a leading article in the summer of 1984, which called for import quotas to be drawn up on "a realistic and scientific basis",[24] which must mean from the West.

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[21] Zeri i popullit, 19 May 1984.

[22] Ibid.; on the valuta lek as the foreign-currency value converted at the official commercial rate: see K. Postoli, "Bankat dhe veprimtaria e tyre ne Shqiperine socialiste," Tirana, 1981, p. 179.

[23] The sourcing of the Combine's other equipment was also diverse—from China spinning machines (dated 1971), from the GDR knitting equipment (1969) and cotton stocking looms (1961), from Czechoslovakia a nylon sock loom (1982). Electrical equipment was Italian and new lace-making equipment was from the Federal Republic of Germany. The cotton spun is homegrown but the polyester fibre used comes from Greece.

[24] Ibid., 31 May 1984. On the inefficiency of spare parts production see Raymond Hutchings, "Albania's Population Boom", Soviet Analyst, 27 June 1984.

TABLE 2.—*Albania's Bilateral Trade Agreements for 1984*

	Month of signature
CMEA members:	
Bulgaria	September 1983
Cuba*	November 1983
Czechoslovakia	October 1983
GDR*	September 1983
Hungary	November 1983
Poland	November 1983
Romania	November 1983
Vietnam*	January 1984
Capitalist countries:	
Belgium	November 1983
France	June 1984
Greece	January 1984
Italy	March 1984
Netherlands	April 1984
Turkey	February 1984

* Partners which do not publish their imports and exports with Albania.

Sources: BBC Summary of World Broadcasts, Part 2, Weekly Economic Report, 29 Sep. 1983, p. A2, 20 Oct. 1983, p.A3, 27 Oct. 1983, p.A2, 3 Nov. 1983, p.A4, 10 Nov. 1983, p.A3, 17 Nov. 1983, p.A4, 1 Dec. 1983, p.A3, 26 Jan. 1984, p.A1, 1 Mar. 1984, p.A1, 29 Mar. 1984, p.A1, 19 Apr. 1984, p.A2 and 7 Jun. 1984, p.A4.

Import saving could be especially harsh in the wake of the reduction in 1983 earnings from electric power exports to Yugoslavia. Hydroelectric supplies were suspended because drought reduced water levels and were only resumed at the end of December.[25] The then Minister of Finance, Qirjako Mihaili, admitted the severity of the situation:

> Despite the deficit in electric power generated by hydroelectric stations and the difficulties that arose therefrom, industrial output rose further in 1983.[26]

Neither he nor any other spokesman cited a percentage increment for all industry for that year and he confined amplification of his statement to selected branch increments. Among the latter was a mere 3 per cent rise during 1983 for engineering; prospects of an efficient import substitution programme seem poor: the current five-year plan envisaged a 43 to 45 per cent expansion of engineering output from 1980 to 1985.

The potential for foreign trade will, on the other hand, be increased by the addition of new transport routes. A ferry service began in December 1983 between Trieste and Durres (renamed after Enver Hoxha following his death) and another between Otronto and Durres is scheduled for 1984; flights from Bari to Tirana may be resumed.[27] More important will be the opening of the rail link to the general European network between Shkoder and Titograd: 64km in length, the 40km in Albania was completed in 1984 [28] and the remainder in Yugoslavia in 1985 (where it is stated that annually 1.1 mn tonnes of freight will be carried).[29] With the 35km railway from Fier to Vlore [30] the line will connect with Albania's two main ports (Durres was the first city in the country to have a railway—1946) and most other centres of industry.[31]

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[25] BBC Summary of World Broadcasts, East Europe, Weekly Economic Report, 28 December 1983, p. i (hereafter BBC Summary).

[26] Zeri i popullit, 27 December 1983.

[27] BBC Summary, 22 December 1983, p. A21, and 9 February 1984, p. A2.

[28] Zeri i popullit, 27 December 1983.

[29] BBC Summary, 17 May 1984, p.A28.

[30] Length from ibid., 26 January 1984, p. A23, completion date from Zeri i popullit, loc. cit.

The planning and plan-implementation of foreign trade remains highly centralized. The Ministry of Foreign Trade itself draws up the draft plan for imports/exports and the balance of payments (by currency zone, by country or by bilateral clearing partner) and—

> makes proposals for increasing exports and issues instructions for preventing superfluous imports.[32]

On the familiar classic Soviet model, foreign-trade enterprises undertake all external transactions and monitor them in considerable detail.[33] There are six foreign-trade corporations for commodities (Agroeksport, Industrialeksport, Mineraleksport, Albimport, Makinaimport and Metalimport) and five for services (Albkontrol Transshqip, Albturist, Albtransport and Drejtbanka) with two other agencies with foreign-trading rights (for publications and for films).[34] The two corporations to which priority is currently attached are Agroseksport (for the export of industrial crops) and Mineraleksport; [35] the latter is also the agent for the transmission of electricity, which seems to have been subsequently on plan to Yugoslavia.[36] Makinaimport was indirectly commended in a study published in early 1984 which cited the index numbers shown in Table 3. Although only the plan for 1981–5 was actually quoted, the parallel strategy is clear—first to widen the output of domestic engineering to produce import substituting equipment from the role given it in 1962 (when imports from the USSR were cut off) of producing spare parts for imported machinery; and secondly to reduce in absolute terms reliance on foreign equipment—to less than half the volume imported during the peak period of imports from China, 1971–75.[37] Throughout the 1970s spare parts output was steadily equal to machinery and equipment production [38] and by 1980 95 per cent of spare parts consumption was domestically produced.[39]

No changes have been made in foreign-trade pricing or in the foreign exchange system, each of which conform to the classic Preisausgleich: the 1981 planning textbook cites the State Bank as making settlements with foreign-trade corporations in valuta leks and with the Albanian partner in domestic leks.[40] Foreign-trade profitability is calculated as the surplus in domestic leks of the valuta lek cost of imports over the valuta lek proceeds from exports.[41]

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[31] The railway to Pogradec on Lake Ohrid will be extended to Korce but a link with the nearby Yugoslav network could be costly in tunnelling.

[32] Njohuri per ekonomine socialiste, Tirana, 1981, pp. 208–9; this is a comprehensive textbook on plan construction and implementation compiled by the Institute of Economics of the Academy of Sciences and the Economics Faculty of Tirana University.

[33] See ibid., pp. 209–10.

[34] Guide e mallrave te eksportit e te importit shqiptar 1982–1983, Tirana n.d.

[35] Minerals and industrial crops were singled out in a discussion of the 1984 foreign-trade plan in Zeri i popullit, 31 May 1984.

[36] Ibid., 27 March 1984.

[37] The Sino-Albanian trade agreement of 16 October 1970 allowed for financing an import deficit of $600 mn over the five years, but actual deliveries cumulated one only of $330 mn. Even so this was 45 per cent more than the actual deficit of 1966–70 (see the present writer in The World Today, June 1979, p. 262 and in US Congress Joint Economic Committee, East European Economies Post-Helsinki, Washington D.C., 1977, p. 1335).

[38] In 1970 production of spare parts was 149 mn leks and of machinery 152 mn leks; in 1979 399 mn and 422 mn leks ("30 vjet Shqiperi socialiste," p. 81, 35 vjet . . . ., p. 64).

[39] Shehu, op. cit., p. 31.

[40] Njohuri . . ., op. cit., p. 218.

III. INDUSTRIAL MANAGEMENT

At the enterprise level the Soviet *tekhpromfinplan* remains the operational fundament—the *plan tekniko-industrial financiar* comprises eight indicators—the production plan, the plan for productive capacity, the plan for employment and payroll, the plan for material-technical supply and for the distribution of output, the plan for technical progress and for scientific research work, the cost plan, the plan for investment and basic construction and the financial plan.[42] The Director, under the principle of "single management,"—

> should seek firstly to fulfill his duties, be held accountable to the entire collective and to higher organs for economic and social activity, and to execute to completion the tasks consequential upon directives and decisions of the Party and of the state. Secondly to ensure fulfillment of management orders consequent upon those tasks, discipline from every worker wherever he operates or works, and control over everybody and everything . . . In the exercise of its productive activity, the enterprise is required to apply the centralized policy on the utilization of socialist accumulation funds, the policy of constructing pay scales, etc.[43]

The reestablishment of such strict adherence to classic Soviet-type practice—the textbook of 1981 from which the quotations are taken, opens with Stalin's "fundamental economic law of socialism—after the break occasioned by 'workers' control" in 1966 has been gradual. In 1970 the role of the mass meeting to formulate the enterprise's annual plan was reduced to formulating a plan draft for submission through the supervisory Ministry or local executive committee (for "central" and "local" enterprises respectively) to the State Planning Commission. Execution was entrusted to "single management", the term for which then replaced the Soviet loan-concept "one-man management" as a compromise.[44] The diffusion of responsibility to local from central administration (enterprises under local executive committees rose from 40 per cent in 1969 to 80 per cent in 1971 [45]) was also a compromise in the sense that it could be an alternative channel for non-management employees after the displacement of worker committees. A plan draft is still put to a mass meeting at the enterprise—that for 1985 was being discussed in May 1984.

By 1977 local authorities began to be shorn of their industrial control and the 1981 textbook makes no mention of them whatever, although other recent sources show that they still operate some enterprises.[46] A Central Committee Plenum of March 1973 introduced "rigorous planning" for a "single state plan through the provision of material-technical supplies", and the enforcement of "contract discipline" between enterprises.[47] In 1983 over 200 material balances were drawn up by the State Planning Commission and ratified by the Council of Ministers; at this central level of supply planning there is also compiled an "urgent list" of imports for the Ministry of Foreign Trade.[48] Among examples of the recent stricter control over inputs was the statement to a conference in 1982 that supplies of motor spirit were 12 percent below those foreseen in the annual plan, of fuel oil 16 percent and of coal 6 percent.[49]

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[41] The example explaining this formula, ibid., p. 222, probably reflects the magnitude of the prevailing rate—one valuta lek of imports sells goods valued at 5.50 domestic leks while one valuta lek of exports costs goods valued at 5.00 domestic lek; profitability (rentabilitet) is hence 0.50 lek.

[42] Ibid., pp. 41–3.

[43] Ibid., pp. 52 and 55.

[44] On the substitution of drejtim unik for udheheqje unike and the other changes of 1970 see the present author and Adi Schnytzer, "The Economic System of Albania in the 1970's," in A. Nove, H. Hohmann and G. Seidenstecher (eds), "The East European Economies in the 1970s," London, 1982, pp. 321–3.

[45] H. Banja, J. Fullani and H. Papajorgi, "Probleme te organizimit e te drejtimit te ekonomise popullore ne RPSh," Tirana, 1983, p. 326.

[46] J. Fullani, Probleme ekonomike, No. 4, 1983, pp. 33, 36 and 37.

That conference—"of leading personnel about improving the efficiency of social production"—was the first of two to review economic policy nationally at the mid-point of the Five-year Plan. It was opened by Besnik Bekteshi, whose senior place in the Party Secretariat in charge of the economy has already been mentioned, and was closed by Adil Carcani, the Chairman of the Council of Ministers. The latter called for a revision of labour norms to ensure their appropriateness for each enterprise. He regretted that in the energy industry in 1982 21 percent of workers had not achieved their norm, while 11 percent had exceeded theirs by more than 10 percent. Since, he continued, 60 percent of global output was accounted for by material inputs, using fewer supplies per unit of output was a major path to raising national economic efficiency.[50] Bekteshi's address does not appear to have been published, but his article of early 1984 sets out three objectives. The first is to apply science and technology rather than "empiricism and the rule of thumb"; the second to raise the rate of accumulation—in 1984 280 economic and socio-cultural projects were under construction (but the 1983 plan was underfulfilled as Table 4 shows); and the third is "rigorous control and discipline".[51]

The other important conference convened in Tirana in April 1983 was on problems of the development of the economy during the Seventh Five-year Plan—opened by Ramiz Alia, now as stated the Party leader, and closed by Enver Hoxha's wife, Nexhmije, who is the Director of the Institute of Marxist-Leninist Studies. While addressing himself to a wide range of topics—principally in relation to preparing the Eighth Five-year Plan (1986–90)—he made much of the need to intensify the use of agricultural land.[52]

Agriculture is discussed in the next section, but it did achieve a positive output increment in 1983 (see Table 4) whereas industry almost certainly did not. No output increase was mentioned by the Minister of Finance in his report on that year and Bekteshi merely spoke of rises in global social product and in agriculture.[53] As Table 4 indicates, no target on which an actual increment has been released was achieved in 1983. The shortage of electricity, the apparent cut in the supply of oil products in the drive to compensate in quantity the loss in price and the stringency on imports of spare parts must have rendered impossible the achievement of the five-year plan target. Assuming that industrial output did not fall in 1983, the cumulation of annual increments show that the 1984 Plan, if fulfilled, would only bring output to 22 percent above the 1930 level, against a 1985 Five-year target of 36 to 38 percent above (or 34 to 36 percent in the original draft, which was over-ridden by the VIII Party Congress).

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[47] Ibid., p. 32.

[48] Ibid., pp. 37 and 38.

[49] Contribution of V. Mullaraj to the conference, reported in ibid., No. 1, 1983, p. 64.

[50] Carcani speech, ibid., pp. 28 and 30.

[51] Bekteshi, op. cit., p. 5.

[52] Alia speech, Probleme ekonomike, No. 2, 1983, pp. 8 and 11.

[53] Mihali and Bekteshi in ibid, No. 1, 1984.

TABLE 3.—ALBANIAN PRODUCTION AND IMPORTS OF ENGINEERING GOODS

[Index, 1971-75=100]

	1976-80 actual	1981-85 plan
Production	156.0	245.6
Imports	83.1	45.0

Source: R. Laperi, "The Engineering Industry on the Path of Transformation to an Industry Producing Machines," Probleme ekonomike, No. 1, 1984, p. 61.

TABLE 4.—ALBANIAN PLAN AND PLAN FULFILLMENT

[Annual percentage increases]

	5-year plan—1981-85		Annual plans								
			1981		1982		1983		1984		1985 plan
	Minimum	Maximum	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	
Global social product	6.0	6.3	7.6	5.6	9.6	4.4	8.1				
Net material product produced	6.2	6.5	8.9		9.0	4.5	8.3				
Global industrial production	6.3	6.7	7.2	6.5	8.5	4.7	6.2		[1] 8.5	3.3	6.2
Global agricultural production [2]	5.4	[2] 5.7	13.1	7.2	15.2	5.0	17.0	9.0	14.7		17.7
Investment [2]	4.1	[2] 4.4	5.8		10.6		14.8	4.0	3.6		
Freight transport (tonne/km)	6.0	6.3			9.4	10.0	6.1		5.1		8.0
Labour productivity:											
In industry	2.5	2.8	3.2	3.2			2.5		5.1		3.2
In construction	2.7	3.0	1.7	3.0			2.8		4.5		2.5
Retail turnover	4.1	4.4		3.0	4.9		7.3	6.0	6.2	3.9	4.0
Exports	9.6	9.9			16.9		16.5		21.4		16.8
Imports	9.3	9.6			16.9						

[1] Of which consumers' goods 6.4.

[2] 5-year average compared with 1976 at annual rate.

Source: For plan Zeri i popullit, 6 November 1981 and Probleme ekonomike, first issue of each year: for actual Zeri i popullit reporting the budget session of the National Assembly (e.g. for 1983 issue of 27 December 1983, which also cited plans for consumers' goods output and retail turnover).

Two industrial branches have received special attention, engineering and chemicals. Something has been said above about policy for the first. As Table 5 shows, employment rapidly expanded since the break with the USSR and by 1982 a substantial training programme had assured that 37 per cent of its workforce were classed as skilled and a further 3 per cent were qualified engineers. Productivity rose rapidly over the first twenty years. On the basis of the index numbers of employment and output in Table 6, gross output per man more than tripled during 1960 to 1970 and nearly doubled over 1970 to 1980. Between 1980 and 1982, on the other hand, the trend seems to have slackened: on the data in Table 6 productivity rise was only 2.9 per cent over the two years. Some cause may be found in the wearing out of, and lack of spare parts for, the equipment installed during the alliance with China. Since Chinese output of machinery in those turbulent years would not have been of enduring quality, stoppages and withdrawal of plant could now be reaching serious proportions. The need for spare parts and compatible replacement machines must have been a factor in the resumption of trade with China in 1983 and the signs of Sino-Albanian rapprochement in 1984. The May Day slogans of 1983 had included "Long live the Party, resolute fighter against all types of opportunism and revisionism; against Soviet, Yugoslav, Chinese and Euro-communism". The corresponding 1984 slogan was identical save for the omission of "Chinese"!

TABLE 5.—PERSONNEL IN ALBANIAN ENGINEERING

[Persons]

	1960	1970	1980	1982
Workers	18,389	26,950	41,683	45,925
Skilled mechanics	2,633	8,791	20,861	28,396
Engineers	643	1,279	2,402	2,684
Total	21,666	37,020	64,946	77,005

Source: As for table 3, p. 61.

TABLE 6.—OUTPUT AND EMPLOYMENT IN ALBANIAN ENGINEERING

[Index numbers, initial year of period = 100]

	1960–70	1970–80	1980–82
Output	533.3	337.0	122.0
Employment	170.9	175.4	118.6

Source: Output 1960–70 from 35 vjet . . . p. 53 and 1970–80 and 1980–82 from Probleme ekonomike, No. 1, 1984, p. 55; employment from table 5.

The same problem of spare parts is haunting the chemicals industry, like engineering mainly established with Chinese equipment. It was criticized in 1983, notably for non-utilization of its capacity. The Directorate of Chemicals at the Ministry of Industry and Mining must have put their finger on the cause in (reportedly) excusing themselves because their technology was poor and imports inadequate. The Party newspaper brushes these aside on the grounds that because—

> the plan has not been systematically fulfilled even for products that do not need imported materials. . . . The Party has set practical tasks to overcome the chemical industry's backwardness. . . . The change can come only through the mass of communists. . . . in order to mobilize cadres, specialists and workers by their example and work.[54]

IV. Material Incentives and Monetary Equilibrium

The quotation just made is typical of the past two decades in its appeal to Party consciousness and moral incentives to foster production. It was an 'Open Letter' of the Party Central Committee in March 1966 that began the most extreme egalitarianism ever enforced as nationwide policy in Europe. A decree of April 1967 made cuts in salaries exceeding 1200 leks a month and another of April

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[54] Leading article, "The Turning Point in the Chemical Industry Must Be Complete and Rapid," Zeri i popullit, 27 May 1984.

1976 reduced the lower limit on high salaries to 900 leks a month and made reductions on those above that limit. The abolition of income tax, also in 1967, raised take-home pay and by 1973 it was being stated that high salaried employees were only receiving twice the average wage.[55] Not everything is clear about either the regulations or their implementation: salaries above 900 leks are permitted and the average wage seems to be around 450 leks. Schnytzer, visiting the country in 1975 was told that the latter was 550 leks and the present author during factory and farm visits in 1983 was given the following:

Wage in leks per month

State farm:	
Worker	450
Director	800
School:	
Young teacher	520
Head	800
Factory:	
Average wage	600
Management	1,000

Although there is little scope for work motivation by high wages within such a narrow distribution, there are differentiated pay-scales. Those currently in force, established in 1976, have from three to six levels, each higher level carrying 4 to 12 per cent more pay than that immediately below: [56] six increments of 12 per cent yields a spread of only 1:2 but, with some bottom scales higher than others, the maximum "vertical" spread is officially stated to be 1:2.5; the "horizontal" spread, as it is termed, made up of allowances for work of particular laboriousness or in particular locations is from 1:1.66 to 1.233. Administrative and technician-engineering staff are on an 11-group scale, between which each increment is between 5 to 10 per cent, yielding a maximum spread of 1:2.9. Differentials within industries do not seem wide—the spread in coal mining is 1:2.85 but that in the chrome industry is 1:2.80.[57]

A new criterion for pay was introduced under a revised Labour Code of June 1980. As Shehu put it to the VIII Party Congress in December 1981:

> Greater attention must be paid also to the application of the measures which have been taken recently for the linking of the remuneration of labour with the quantity, quality and expenditure of production in the economic enterprises and agricultural cooperatives.[58]

Implementing regulations were applied in industry, construction and communications during 1981.[59] In a factory visited by the present author in 1983, the average wage of 600 leks a month was that paid on completion of the plan.

The "special fund of the enterprise" (fond te vacante te ndermarrjes) is supplied from enterprise profit in accordance with its financial plan but may not be less than 1 per cent of the aggregate payroll nor more than 2 per cent, given that certain enterprise targets are met. For enterprises where workers are all on time rates 60 per cent of the funds must be spent on amenities (sports, creches, grants in cases of misfortune, etc.), for enterprises with piece rates the shares are from 30 to 70 per cent.[60] The small magnitude of these outlays with respect to the payroll means that their motivational impact must be modest.

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[55] For an account of the egalitarian policy and sources see Schnytzer, op. cit., pp. 113-16.
[56] H. Banja, "Probleme te shperndarjes sipas punes," Tirana, 1982, p. 70.
[57] All data from ibid., pp. 71-7.
[58] Shehu, op. cit., p. 156.
[59] Banja, op. cit., p. 76-7.

Nor is there much in the shops or on offer as consumer services to tempt workers to seek to earn more. Albania has resumed the policy of Stalin's USSR of conveying general productivity gains to households by retail price reductions (in the USSR Khrushchev replaced it by wage increments and Brezhnev by narrowing wage differentials). Between 1950 and 1969 thirteen sets of retail price reductions were applied, but none were made in the 1970s.[61] The process was restored in the 1980s with cuts ordered in 1982 and in 1983.

Income distribution is so narrow that the mix of wage goods purchases is similar among non-farm households. The central financial authorities do not therefore have to adjust prices to achieve microeconomic monetary equilibrium by identifying price elasticity with respect to income. They merely have to achieve macroeconomic monetary equilibrium to ensure that forecast purchasing power made available through payrolls is equalled by the planned output of wage goods and services at predetermined prices—appropriate allowances being made for saving and for the purchases and sales of cooperative farmers. Because wage scales remain broadly constant there are only two factors in change—wage drift and urbanization. Wage drift includes increases in the payroll due to a rise in the share of skilled workers (as evidently from Table 5 has taken, and continues to take, place in engineering), and increases in the share of higher-paid occupations (coal mining at the top of the wage scale has certainly raised its relative share of employment at the expense, say, of food processing, low in the wage scale). The trend labelled urbanization reflects both the increase in the nonfarm workforce and monetization over the spectrum from self-sufficing households to modern townsfolk. The urban population nearly doubled between 1960 and 1980 (499,000 to 898,000) (202,000 to 584,000)—the number of wage-earners more than doubled between 1960 and 1978—though present policy is to hold the share constant.[62] Monetization is demonstrated by the assurance over the same period of at least one shop and a supply of electricity in every Albanian village.

V. Public Finance

The principal instruments for ensuring macroeconomic equilibrium for household transactions are wage control exercised through state enterprises subject to plan requirements and price control exercised over state shops and services, similarly subject to the plan. The money link between that balance and that of enterprise financial plans (as described above) is of course the government budget, set out in as much detail as published in Table 7.

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[60] S. Bllaca, "Rezultati ekonomik dhe rentabiliteti ne ndemarrjet industriale," Tirana, 1975.

[61] H. Banja, "The Construction of the Economic Base of Socialism and Its Perfection in the PSR of Albania," Tirana, 1982, p. 182.

[62] Hutchings, op.cit., states that the urban increase to 2000 is planned at 44 and the rural at 42 per cent.

Since the decision to abolish personal taxes in 1967 (this entry in the budget ceased from 1970), most government revenue has been collected by state and cooperative institutions—predominately as turnover tax and profit deductions: in the 1984 Budget they constituted 96 per cent of all revenue, larger than at any time in the past.[63] Expenditures are classified on the Soviet system: the most interesting fluctuation is of planned defence expenditure which rose to a peak of 940 mn leks in 1980 and 1981 as the programme of total territorial defence was implemented. The death of Shehu must be the cause of the drops in 1982 and 1983, but the upturn in the 1984 and 1985 budgets is startling and may be linked to Hoxha's xenophobia as his life drew to a close.

Control over financial instruments is headed by the Ministry of Finance, which has a Directorate of Financial Control and Inspection (Drejtoria e Kontroll-revizionit financiar) for the very detailed and meticulous operations required; it works in close liaison with the State Bank, the documentation of which can be examined by the Directorate. Each ministry has its directorate of finance and accounts to cooperate with the Ministry of Finance and with the departments of finance and accounts in enterprises and the 'economic offices' in cooperative farms; "money circulation in our country" as a recent study observed, "is planned and centralized." [64]

TABLE 7.—ALBANIAN BUDGET

[Millions of leks]

	1978	1979	1980	1981	1982	1983	1984	1985
Revenue:								
Through state and cooperative enterprises and institutions	6,801	7,157	7,346	7,580	7,823	8,022	8,804	8,747
From other services	999	646	654	620	727	778	396	503
Total	7,800	7,800	8,000	8,200	8,550	8,880	9,200	9,250
Expenditure:								
Economy	4,868	4,766	4,821	4,866	4,792	5,031	5,062	4,831
Social and cultural measures	1,749	1,826	1,919	1,982	2,254	2,290	2,401	2,460
Defence	885	915	940	940	935	910	1,010	1,700
Administration	97	107	118	126	141	146	144	138
Other	101	136	152	236	378	373	533	71
Total	7,700	7,750	7,950	8,150	8,500	8,750	9,150	9,200
Surplus	100	50	50	50	50	50	50	50

Note:—All are plan estimates, the actual out-turns have not been published since those for 1978, except for total revenue (8504 mn in 1982) and total expenditure (8476 mn in 1982).

Source: *Probleme ekonomike*, first issue of each year but last of 1984.

The planned surplus of revenue over expenditure has long been constant at 50 million lek, although the actual accounts tend to close with a smaller sum, e.g. 26.8 mn leks in 1982. One reported use is to offset the cost of retail price reductions, which, as just noted, resumed in 1982. A commentary on the announcement of the 1983 cut said that the 17 mn lek equivalent of the reduction in pharmaceutical prices and the free issue of anti-tubercular prescriptions—at present only prescriptions (of any kind) for babies up to one-year-old are gratis—would be met from the government reserve.[65] This implies that the shortfall in turnover tax from, or the increase in subsidy to, the chemicals industry would use some of the budget surplus.

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[63] A list of revenues and expenditures, some of which are grouped (by difference) as 'other' is given in Njohuri . . ., p. 339.

[64] L. Kriqi, B. Gjika and S. Gjoni, "Elemente te teorise e praktikes te kontroll-revizionit financiar," Tirana, 1981, pp. 31-33, and Postoli, op. cit., p. 32.

Another use for the budget surplus, if Soviet practice is followed, is to set against the expansion of credit extended by the State Bank. No returns are published of such credits even in the most aggregative form, but an index of their value has been released (Table 8). It closely follows the trend of the budget appropriation for the economy, which it may be concluded is the principal source for bank funding. The layout of the accounts (credit plan) of Albania's two banks shows (Table 9) direct funding of each bank by government. The Agricultural Bank (established in 1970 and with its competence enlarged in 1977 [66]) is a subsidiary of the Albanian State Bank, which partly funds it, but has income and a lending structure of its own. Household transactions enter the accounts by deposits in the savings bank (which does not rank as an autonomous agency) and those deposits constitute a use of purchasing power in the household income and outlay balance (Table 10). The study from which Tables 8 to 10 are drawn does not indicate whether such savings are voluntary or constitute frustrated or delayed purchases. That source makes provision in the list reproduced in Table 10 for an excess or a shortfall of purchasing power (not shown in the Table). Manifestations of a "shortage economy" are the queues to be seen for some goods and the unavailability of others (wine and chocolate were among the more luxury goods so noted in March 1983, but which were supplied in a friendly gesture by assistants when the shopper was a foreigner). As observed above, however, the narrow distribution of income and the planned income constraint generally modify the symptoms of repressed inflation. The complete abolition of the collective-farm market has removed the barometer of shortage in state shops of goods saleable by farmers.

TABLE 8.—BANK CREDIT IN ALBANIA

	1950	1960	1970	1980
Budget appropriation for "economy" (index 1950-1)	1	5	12	21
Total bank credit (index 1950-1)	1	6	13	23
Percentage distribution of credit:				
Industry	14.6	29.3	27.4	35.5
Construction	2.6	4.1	2.3	4.4
Agriculture	2.3	5.6	10.1	17.7
Trade	62.3	44.6	48.8	28.2
Other	18.2	11.4	11.4	14.3

Source: Budget appropriation from 35 vjet . . . p. 136 (1950-70), and Table 7 (1980); bank credit total from Probleme ekonomike, No. 3, 1982, p. 124 and distribution from K. Postoli, Bankat dhe veprimtaria e tyre ne Shqiperine socialiste, Tirana, 1981, p. 13.

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[65] BBC Summary, 14 April 1983, p. A7.

[66] Postoli, op. cit., p. 9.

TABLE 9.—*Credit Plan of Albanian Banks*

Resources	Utilization
I. Albanian State Bank	
1. Funds of the Albanian State Bank.	1. Short-term credits—to enterprises.
2. Deposits of enterprises, of institutions and of the savings bank.	2. Long-term credits—to individuals for urban dwelling construction.
3. Funds of the state budget. Less: Funds of the Agricultural Bank.	
II. Agricultural Bank	
1. Funds of the Agricultural Bank.	1. Short-term credits: a. to enterprises. b. to cooperative farms.
2. Deposits of enterprises and institutions in the agricultural sector and of cooperative farms.	2. Long-term credits: a. to cooperative farms—for use during the year. b. to individuals for rural dwelling construction.
3. Finance from the state budget.	
4. Funds of the Albanian State Bank.	

Source: Postoli, op.cit., pp. 59-66.

TABLE 10.—*Balance of Household Income and Expenditure in Albania*

Income	Expenditure
1. Wages and salaries.	A. Sales of goods at first hand:
2. Remuneration of cooperative farmers.	1. State trade. 2. Agricultural cooperative trade.
3. Social security payments.	B. Non-trade expenditure:
4. Awards and assistance from the state budget.	1. Various services. 2. Savings bank deposits.
5. Income from state sales in the collective sector.	3. Other non-trade outlays.
6. Other.	

NOTE.—The secondhand market is a transfer among households.
Source: Postoli, op.cit., pp. 45-6.

VI. THE TIGHT STATE CONTROL OF AGRICULTURE

The total exclusion of private trade went hand-in-hand with the reduction in size of private plots of cooperative farms and the continuing transformation of the latter into those classed as "higher-type", which differ but little from state farms. Agriculture is thus far more tightly controlled and private economic activity more hermetically excluded than in any other country. While private initiative is being encouraged elsewhere in the communist world—the 'responsibility system' in China, the Gorbachev reforms in the USSR, the flourishing combination of private and cooperative farming in Hungary—the Albanian trend is diametrically contrary.

Provision for a "cooperative farm of the higher type" was made in a decree of 15 July 1971.[67] In his report to the VII Party Congress (1976) Hoxha stated that higher-type cooperatives occupied 23 per cent of cooperative arable land and produced 25 per cent of grain grown by cooperatives,[68] but neither he nor Shehu in reports to the VIII Congress (1981) gave further statistics. Hoxha did make it clear that the triple-stage process would be fostered—from cooperatives to the higher type and thence to state farms.

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[67] Gazete zyrtare, No. 8, 1971.

> Work will continue to consolidate the higher-type cooperatives, some of which will be transformed into state farms. This will serve as an experience for the future, too. Other higher-type cooperatives will be set up in the lowland zones. Some cooperatives of the hilly and mountainous zones may also become higher-type cooperatives, depending on their development and the possibilities of the state.[69]

He made the political comparison that "In the USSR and elsewhere the existing form of collective capitalism is now associated, to a large degree, with direct forms of private property." [70]

Cooperative farmers now have household plots of a maximum of 200 sq.m. and are under pressure to turn over their livestock to the cooperative. Hoxha declared at the VIII Congress that the Central Committee—

> approved the revolutionary initiatives of the peasantry for the further restriction of the cooperative plot and the formation of joint herds from the members' personal livestock.[71]

But Shehu warned at the same Congress that—

> account must be taken of the very important and very responsible new tasks which emerge from the formation of joint herds and flocks from the personal livestock of the cooperativists . . . They must take all measures to ensure the feeding and housing of this livestock, so that their production is not merely maintained but is increased . . . Cooperative families must be guaranteed regular supplies of milk and other livestock products throughout the whole year.[72]

The extent of the transfer of livestock is shown by Shehu's statement that by December 1981 all private sheep and goats had been handed over and all private cows given up in 13 districts of the lowland zones: [73] this implies that only in the upland zones were cattle then in private hands. But as there are no markets on which produce can be sold, any private output must be sold to the cooperative at official procurement prices.

The drive to transfer arable land to industrial crops must limit the ability of cooperative farms to provide their members with foodstuffs in compensation for that previously grown on the household plot. Some of the planned increment in industrial crops is intended to come from more intensive cultivation, but the yield increases planned for 1984 could, for example, be realistic only if some of the 1983 yields had been disastrous—a 76 per cent rise in the yields of cotton, 49 per cent in tobacco, 11 per cent for soya and 9 per cent for sugar beet.[74]

The degree to which Albania relies on its agriculture is evident from the statement that in 1981 nine-tenths of personal consumption was of farm produce, and that farm produce furnished 90 per cent of the raw materials for the textile, footwear and food processing industries and a quarter of exports.[75] That Albania is above all a primary producer is further stressed by the domestic assurance of 87 to 90 per cent of raw material inputs into social product.[76] An article by a member of the Committee for Prices and Standards in 1984 pointed out that lower prices are paid for sub-standard farm produce, both for export and home sales.[77]

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[68] E. Hoxha, Report to the Seventh Congress of the Party of Labour of Albania, Tirana, 1976, p. 55.

[69] Hoxha, Report to the Eighth Congress, op. cit., pp. 39–40.

[70] Ibid., p. 41.

[71] Ibid., p. 38.

[72] Shehu, op. cit., p. 103–4.

[73] Ibid., p. 36.

[74] Zeri i popullit, 29 May 1984.

[75] Themie Thomai and Lufter Xhuveli, Probleme ekonomike, No. 2, 1983, p. 53.

The share of agriculture in net material product has been falling: from 76.3 per cent in 1950 and 44.4 per cent in 1960 to 37.9 per cent in 1978; [78] in 1960 the ratio of agriculture to industry was 49.1:50.9 but was 31.3:68.7 in 1980.[79] Output in absolute terms has been raised but virtually all the cultivable land is now in use after twenty years of laborious terracing of hillsides, the cultivation of the uplands and the drainage and irrigation of the plains. The marginal land now under crops or plantations (olives, vines and fruit trees were planted on the new terraces to free bottom land for arable crops) is so poor that 'intensification' is now the order of the day. The Minister of Agriculture, Mrs. Themie Thomai, published in 1983 a seven-point programme for agricultural intensification, with the sub-title—"the main permanent path for the development of agricultural production".[80]

Obviously this is the best use to which Albania's surplus of manpower can be put in conditions of isolation. Emigration—the path open to fellow Albanians in Kosova—is strictly prohibited and the demographic increase is, with that of the Kosovars, the highest in Europe. Under a strongly pro-natalist as well as isolationist government, Albania's sole means of feeding itself is now to gain more food per hectare; since, moreover, farm produce constitutes a quarter of exports a surplus to domestic needs must additionally be furnished.

Fertility is extremely high even on the average of urban and rural districts—births in 1978 were 27.5 per mille against 38.5 in 1950—while mortality has been sharply reduced—6.3 in 1978 against 14.0 in 1950 (with a corresponding lengthening of life expectancy at birth—68.6 years in 1976–7 against 53.5 in 1950–51).[81] The latter has been especially marked in rural districts: in 1956–60 the ratio of rural to urban death rates was 1:1.75 (12.1 per mille against 6.9), but in 1976–80 it was only 1:1.23 (7.0 per mille against 5.8). But so large is the birthrate in rural areas that the natural increment there is now generally greater than it was two decades ago. Table 11 ranks districts by degree of urbanization: those with a high proportion of townsfolk have shown decreases in the rate of demographic growth, while those with a high share of villagers have shown increases. It is thus in rural areas that the increment in active manpower of 210,000 during 1981–85 [82] would arise and, as Hoxha put it to the VIII Congress:

> Employment of the new workforce calls for profound studies by the State Planning Commission, the State Committee of Labour and Wages, the other central de-

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[76] Ibid., 2 May 1983. Since the article was about self-sufficiency it was noted that 95 per cent of spare parts were of domestic manufacture.

[77] Ethem Zeqaj, ibid., 19 May 1984.

[78] 35 vjet . . ., p. 135.

[79] H. Banja, I. Fishta and V. Toci, Probleme ekonomike, No. 1, 1983, p. 132.

[80] Thomai and Xhuveli, op.cit., pp. 52–67. The brigade system is especially recommended for intensification (K. Kota, ibid., No. 3, 1983, pp. 55–64).

[81] 35 vjet . . ., p. 28–30.

[82] Hoxha, Report to the Eighth Congress, op. cit., p. 58.

partments, the executive committees of the people's councils of the districts, the enterprises and agricultural cooperatives.[83]

With emphasis in the health service under the current Five-year Plan to reduce infantile mortality, the long term prospect is for continued demographic expansion until urbanization significantly slackens fertility. This has two consequences, of which job creation to match incremental manpower has just been mentioned. The other is a continuing rise in the ratio of children to the gainfully occupied. In 1979 32 per cent of the urban population and 40 per cent of the rural were aged under 15 years and the share of the active population to those above and below working age (15–59 for men and 15–54 for women) was as low as 55 per cent. Scant relief of such a high dependency ratio can be found by increasing the share of gainfully occupied among the active population, since women are almost as much economically active as men (though in agricultural work they tend to follow tradition and operate in gender groups). With current overpopulation in rural areas there is little to be gained by mechanization: most field cultivation and livestock rearing is manual and probably brings higher yields per hectare than could be achieved with machinery. What is needed is fertilizer, hybrid seed, pesticides and the many other techniques for enhancing land fertility. In the Minister of Agriculture's programme the national use of water resources is point two, an increase in fertilizer supply is point three and mechanization to relieve a labour shortage at peak times for large-scale crops is point five.[84] Anxiety over the domestic chemicals industry, already noted, is related to the need to produce more fertilizer, but a complement of imports of other agricultural inputs must be sorely missed.

TABLE 11.—URBANIZATION AND POPULATION GROWTH IN ALBANIA

	Percentage urban 1980	Natural increase percentage		
		1951 to 1960	1971 to 1980	Change
Tirana	66.2	5.5	2.2	−2.3
Durres	48.4	3.2	2.2	−1.0
Vlore	45.8	2.2	1.7	−0.5
Elbasan	40.2	3.1	3.4	+0.3
Berat	37.7	3.6	2.4	−1.2
Gjrokaster	37.7	1.2	1.2	0.0
Kruje	33.5	3.8	2.5	−1.3
Shkoder	33.5	2.0	1.8	−0.2
Korce	32.3	2.3	1.4	−0.9
Skrapar	30.2	0.1	3.2	+3.1
Fier	27.2	3.1	2.5	−0.6
Sarande	27.0	2.5	1.9	−0.6
Kolonje	25.0	0.4	1.1	+0.7
Tepelene	23.8	2.0	2.0	0.0
Pogradec	23.2	1.3	2.4	+1.1
Lushnje	20.5	5.5	2.0	−3.5
Permet	19.6	0.1	1.2	+4.1
Lezhe	18.0	2.9	3.0	+0.1
Gramsh	15.6	0.7	2.8	+2.1
Kukes	15.5	1.2	2.8	+1.6

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[83] Loc. cit.

[84] Thomai and Xhuveli, op, cit., p. 58.

TABLE 11.—URBANIZATION AND POPULATION GROWTH IN ALBANIA—Continued

	Percentage urban 1980	Natural increase percentage		
		1951 to 1960	1971 to 1980	Change
Mirdite	13.9	1.3	3.0	+1.7
Tropoje	13.1	2.3	2.8	+0.5
Mat	12.6	2.6	2.4	−0.2
Librazhd	10.1	2.2	2.8	+0.6
Puke	9.9	3.0	3.5	+0.5
Diber	9.8	2.1	2.4	+0.3
National average	33.6	2.9	2.3	+0.6

Source: V. Misja, Shndrrimet ne nivel in dhe strukturen arsimore te popullsise ne RPSSh, Tirana, 1982, pp. 76–7.

When it broke with the USSR in 1961, Albania had a population of 1.6 million: self-reliance on Maoist lines was politically attractive and economically feasible. By the time the forecast of 4 million is reached at the end of the century, a country with only 600,000 hectares of arable land must perceive "intensification" with great urgency. What is lacking from the seven-point program for Albanian farming are incentives and imports.

The diminution of the household plot the restriction of farm-produce markets to state distributors, the pressure to abandon private stockbreeding, the virtual nationalization of cooperatives and the egalitarian wage structure on state farms all tend to eliminate the incentives which would reward intensification. Private initiative has not been entirely eliminated, but it is illicit and could be stopped at any time: a visitor in the summer of 1984 saw a peasant woman selling eggs which until the moment of sale was concealed beneath her voluminous skirts and another distributing bunches of onions to her children for hawking among shoppers.

The constraint on imports is, as has already been stressed, as much a general as an agricultural problem. To support a population fifteen years hence of 6½ persons per arable hectare is inconceivable without participation in international trade.

Ramiz Alia may be the leader who will raise consumption by opening the economy. His speech on the 40th anniversary of liberation in November 1984 included more reference to the improvement of the standard of living than was then the convention and a call for mutually advantageous international trade. By stressing that Albania's interests lay with the European states, he must have had in mind diplomatic relations with the UK and the FRG, but a continuing blockage with the United States and the USSR. His contemptuous return of the Soviet telegram of condolence on Hoxha's death assures Albania's place as the sole Soviet-type economy with no links with the USSR.

BULGARIA

RECENT ECONOMIC PERFORMANCE AND POLICY IN BULGARIA

By Marvin R. Jackson*

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I. SUMMARY

This paper looks for evidence of what may explain the relatively good performance recently recorded by the Bulgarian economy. That includes both being able to pay down a foreign debt in convertible currencies at a rapid rate beginning 1979 and maintaining

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a relatively high and stable growth rate of total production. Among the possible explanations of the country's performance are:

(1) Illusions of statistics, not only what are missing but also defects and hidden meanings of those published;

(2) The relatively less-developed state of economy, something which might allow growth merely through structural change;

(3) Special relations with the Soviet Union in trade or credits;

(4) Appropriate policies tied to an orthodox centrally-planned economy;

(5) Successful application of some kind of new economic mechanism;

(6) Special "non-economic" circumstances arising from the country's past or the non-economic effect of its political leadership, things which give it special responses in economics.

The paper presents evidence on all save the last possibility listed. It is divided into two broad parts: (1) a review of more detailed indicators of performance and resource allocation patterns, the latter suggesting quantitative dimensions of policies applied, and (2) a general summary of the provisions of Bulgaria's recently launched "economic approach" to national economic administration to give a sense of whether the country still has an orthodox centrally-planned system.

A significant number of statistical problems are encountered in the analysis of Bulgaria. Its own national production accounts are confused by the way foreign trade flows are evaluated. Trends in foreign trade prices and volumes by commodity groups are lost by adding ruble and dollar trade. Connections between foreign trade and national income balances are vague. The division of final product flows available for domestic use into the main categories of investment and consumption is distorted by the usual domestic statistics on material consumption and net investment. Still there stands out two distinct periods recently, 1975 to 1980 and since 1980.

Rates of growth of Bulgarian production, investment and consumption were all pulled down by the effort of moving from a large deficit, 694 million devisa leva, in 1975 to a surplus of 619 million in 1980. The task was more difficult because it took place in the face of a substantial decline in the terms of trade. During this time the country's net material product averaged 6.1 percent annual growth, but net material product available for final domestic use averaged only 2.8–3.3 percent growth. "Corrected" measures of consumption and investment growth based on official statistics suggest the burden was about equally distributed in the two allocations categories.

Bulgarian consumers felt the pressure of reduced growth of available final goods from 1977 or 1978. It culminated in 1980 when meat sales fell and other food supplies were tightened by the poor harvest. By then the pressure was already off investment supplies. Producers' inventories had risen in 1978 and in 1979, by 30 percent alone in the latter year. In 1980 they jumped again by 25 percent and were joined by a 7.5 percent rise in fixed capital investments (both figures in constant prices). From the investment point of view, a new period in the Bulgarian economy began in 1979 or 1980.

In the second period, 1981 saw significantly increased growth of consumption and investment, especially the latter. Then growth in both cases was reduced in 1982. That year might have seen an absolute reduction of total investments if the fall of those in fixed capital had not been more than offset by increases in producer inventories. Given what has happened in 1982 and what is planned in 1983 and 1984, it appears that Bulgarian consumers face about the same growth of income and real spending as in 1976–80. But more of the income may have to come from earned sources and more of the spending may be on locally-supplied goods and housing.

Investments in fixed capital in the first half of 1983 jumped 10 percent over the first half of 1982. This combined with a plan calling for 8 percent growth in 1984 suggests that the previous balance-of-payments contraction is (temporarily) over. However, what is surprising and worrisome is the state of Bulgaria's balance of trade. Record deficits of over 700 million devisa leva were recorded in CMEA trade during 1981 and 1982 while another one as big shows in the first half of 1983. With the developed capitalist countries, after reaching almost balanced trade in 1980, Bulgaria recorded deficits of over 600 million devisa leva each year, 1981 and 1982; here the first half of 1983 shows an improvement. Against these large deficits were matched surpluses each year with the less developed countries of 1,200 million devisa leva (and of uncertain foreign currency content). Most of this trade was with Arab countries (including North Africa) and Iran. Much of the surplus was built on exports of projects, machinery and equipment, although food exports were also important.

The structural priorities in the Bulgarian economy suggest no evident change from the continued emphasis on the development of certain lines of industry. There is no evidence that agriculture will receive higher relative priorities. Manpower will continue to move out of the sector and be replaced by more capital. In terms of the country's own system of prices and national accounts, the shift of one occupied person from agriculture to industry increases that person's contribution to the national product by 70 percent. At the same time labor productivity in agriculture is still below its 1979 level while in industry it is higher by 8–9 percent. In these terms some of the country's performance is accounted for by the structural change characteristic of a developing, but still less developed country. Also, it ought to be remembered that still half of the urban persons of 18 years age were born in Bulgaria's villages. One would expect their productivity to be low and to rise as they settled into urban life.

But clearly Bulgarian agriculture must be treated with care. Exports from it have had better price performances than either consumer manufactured goods or machinery from industry. Besides, as shown in 1980, when crops are bad, Bulgaria has few reserves to protect urban consumers and a major source of incentives for industrial workers.

The main official hope to change incentives in both agriculture and industry is reorganization in the form of "the economic approach" to national economic administration and its "economic mechanisms". A review of the rules for them published in 1982 suggests that their more interesting features are (1) the attempt to tie material incentives to changes in performance, both income and profit growth, rather than plan fulfillment, (2) the attempt to stimulate competition by liberalizing the lines of production and the kinds of activities that may be done by enterprises and economic organizations, (3) possibly the accommodation of limited decentralization of pricing of final industrial products to the level of producers and users/buyers. But this is a rather uncertain inventory. More study of the rules and their application is needed.

Has the performance of the Bulgarian economy been visibly influenced by the economic approach to national economic administration? Since its introduction in 1979 and 1980 the following changes may be enumerated: (1) from evidence available through 1981, minor upward shift in investment financing from organizational funds and a downward shift from bank loans (a constant share from the state budget); (2) aside from the large increases in producer prices in 1980 in all sectors and another in agriculture in 1981, small upward shifts in industrial prices in 1981 and 1982; (3) since 1980, planned output growth coinciding more closely with actual output growth (Table 2); (4) since 1979 or 1980, a phase of more rapid investment growth (Table 3) and increased balance of trade deficits with CMEA and the developed capitalist countries (Table 4); (5) in 1981 and 1982 terms of trade declining even more than in the past (Table 8). But there is little ground at this point for connecting the economic approach to any aspect of performance.

In the first place it is not known just how much of the new approach is operational. Already complaints indicate higher-level resistance to change. Besides, by design, the new arrangements leave in place significant central planning and other opportunities for central control. In this respect one must ask what Bulgarian leaders wanted from the new system. Certainly no market socialism is intended. More to the point, they clearly have not intended to give up control over the major macroeconomic dimensions of the economy. And it is changes at this level that have been the focus of the paper.

Finally, it ought to be asked what would be expected from such changes in organization. There is no ready theoretical reference. What has been learned from Hungary's case, and Bulgaria's system has not changed that much, is that change is not only resisted, but also when it comes, it is hardly visible in terms of macroeconomic performance indicators. Bulgaria's outcome is unlikely to be different.

II. Introduction

Bulgaria's recently recorded economic performance has been a good one, externally and internally, by any general comparative standard save that of the amount and quality of its economic and financial statistics made available for international eyes.

From a relatively perilous position of having the highest burden of hard-currency debt in CMEA in 1974 and 1975, it arrived at a position in 1982 of having paid down the net debt to an estimated $1.8 billion and a debt service ratio of about 20 percent, lower than any other European CMEA country save Czechoslovakia and the U.S.S.R; [1]

As in other CMEA countries overall growth rates of net material product have tended to decline. This began in 1976 and except for one year, 1979, declined slowly each year, reaching 4.3 percent in 1982, two-thirds of the average growth rate in 1976–80;

In 1981 and 1982, even with declines, Bulgarian growth rates for net material product produced (the CMEA concept of value-added in production) and for gross national product (by Western estimates) were the highest in European CMEA countries; [2]

The author of this paper spent time living off the economies of both Romania and Bulgaria in the summer of 1983. By contrast to their neighbors, Bulgarian consumers enjoyed a relatively equilibrated economy;

Overall Bulgarian growth rates for 1981, 1982, and possibly the first half of 1983 are in excess or close to average rates planned for 1981–85, but also close to those planned each year.

The purpose of this paper is threefold: (1) to explore further quantitative details of Bulgarian economic performance and resource allocation policies in recent years, (2) to outline the major dimensions of a major organizational restructuring initiated in 1979, and (3) to suggest answers to the question of what explains the apparently good recent performance of the economy. There are numerous possibilities. Could the comparative Bulgarian performance be due to:

(1) A statistical illusion, partly from the poor quality and definition of published statistics and partly from lack of knowledge (of balance of payments, foreign debts and energy trade data, as examples).

(2) Bulgaria's relatively less developed state, one which has permitted large increments of growth from a combination of high investment rates and large transfers of labor to industry and/or ample supplies of exportables of easy access to hard-currency markets.

(3) Special relations with the Soviet Union in which credits or relatively favorable opportunities for trade have been provided.

(4) An application of unusually appropriate policies within the framework of conventional institutions and rules of a Soviet-type, centrally planned economy.

(5) A relatively rapid application and positive responses to a fundamentally new set of institutions and rules, a "new economic" mechanism.

(6) Or, possibly independent of economic institutions and policies per se, some especially positive motives of Bulgarian

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[1] See Jan Vanous, "Bulgarian Foreign Trade Performance in 1982," and "East European and Soviet Hard-Currency Trade and Debt in 1981" in Wharton Econometric Forecasting Associates, Centrally Planned Economies Current Analysis, 7 April 1983 and 27 April 1982. This publication is henceforth referred to as *WEFA/CPE/CA*.

[2] A most useful comparative analysis of the official data of the CMEA countries is in the United Nations, Economic Commission for Europe, Economic Survey of Europe in 1982 (New York, 1983), pp. 101-224. Comparative gross national product estimates are found in the sources to Table I below.

managers and workers conditioned by social attitudes, "non-economic" institutions, and national history.

In all likelihood Bulgaria's comparative economic performance has a multiple of sources some of which may be covered with the help of more powerful methods of analysis. In this survey, one can only hope to find the information which hints at their dimensions.

III. THE GROWTH AND STRUCTURE OF OUTPUT

Several views of the growth of Bulgarian production are set out in Tables 1 and 2. Table 1 also raises questions about the country's official statistics.[3]

Table 1-I reveals a pattern of sectoral growth that is much more unstable than the aggregate. Value-added in agriculture fell, not grew in 1976–80, a performance largely due to the large decline in 1980 and another in 1977. Both were blamed on bad weather, a factor that will surely spoil the production figure again for 1983. It is tempting to blame agriculture as a cause of industry's poor performance in 1980 because the food industry accounted nearly 24 percent of the sector's gross output in 1981, a share matching the combined total for machine-building, metalworking, electric equipment and electronics. True, gross output in the food branch did not grow in either 1977 or 1980, but that did not prevent value-added in industry from growing nearly 10 percent in 1977.

The problem with Bulgarian industry in 1980 appears to be that the increase of total output of the sector, about 19 percent in current prices and about 4 percent in real terms, was accounted for by increases in inputs called "material expenditures." This category covers both depreciation charges and purchases from other sectors of "material production." It increased 26 percent in current prices terms and about 6 percent in real terms. Therefore, prices of inputs to Bulgarian industry in 1980 increased about 19 percent while prices of outputs increased only 14 percent. Value-added was squeezed both ways, to a growth of 2.2 percent in current prices and only 0.4 percent in real terms.[4]

In searching further it is clear that depreciation charges were raised significantly in 1977, but not in 1980. Rather in that year there was a sharp rise in the share of industrial cost attributed to fuels and energy. In fact, the shares jumped in all sectors except the so-called "heating" [toplina] industry based mostly on domestic coal.[5] This observation suggests the changes came from imported fuels and energy.

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[3] This and more information about Bulgaria's economy in earlier years may be found in Marvin R. Jackson, "Bulgaria's Economy in the 1970s: Adjusting Productivity to Structure," in East European Economic Assessment, Part 1—Country Studies, 1980, a compendium of papers submitted to the Joint Economic Committee, Congress of the United States (Washington, D.C.: February 27, 1981), pp. 571–618.

Bulgaria's published statistical record is inventoried in the author's paper, "The Quality of East European Statistics: Country Assessments—Bulgaria and Romania," in Basket Two Compliance: East European Economic Statistical Quality. Prepared for the Commission on Security and Cooperation in Europe (Washington, D.C.: The Congressional Research Service, May 1981), pp. 53–73.

[4] Calculations in this case are based on the absolute values of total output and net material product by sectors, the shares of the sectors in both magnitudes in constant prices and the indices of real growth—all available in the Bulgarian statistical yearbook.

[5] See for example the latest data in Statisticheski godishnik 1981, p. 206, and outputs of the "heating" branch on p. 198.

TABLE 1.—ALTERNATIVE ESTIMATES OF REAL GROWTH RATES OF VALUE-ADDED IN PRODUCTION

[Percent]

	Shares [2]	1976–80 [3]	1979	1980	1981	1982
I. Bulgarian official data: [1]						
Net material production	100.0	6.1	6.6	5.7	5.0	4.3
Industry	53.5	6.8	5.3	0.4	6.0	7.3
Construction	8.9	4.5	3.1	4.2	8.3	5.4
Agriculture	18.4	−5.0	10.2	−20.5	4.5	5.5
Forestry	0.6	0.2	−7.7	16.8	2.5	[4] −3.0
Transportation	7.3	5.4	3.2	1.8	10.3	
Communications	1.0	5.8	12.8	6.6	6.4	
Trade	8.0	22.5	21.4	119.7	−1.9	
Other material sectors	2.3	12.6	11.8	26.4	0.1	
II. Western calculations:						
Gross national product	100.0	0.9	3.8	−3.1	3.0	2.8
Industry	35.1	3.2	3.5	2.4	2.6	3.0
Construction	6.7	1.2	−0.9	−3.0	−0.2	0.0
Agriculture	27.2	−3.4	9.3	−16.9	5.0	4.4
Forestry	0.4	−2.7	−3.3	−5.2	−2.4	0.0
Transportation	7.4	3.6	1.0	1.8	5.4	2.2
Communication	0.7	0.6	0.8	0.4	−0.8	0.0
Trade	7.2	1.2	1.1	−0.5	1.7	3.1
Other material sectors	0.4	4.5	6.8	3.7	1.8	4.2
Housing	4.4	2.9	2.2	2.4	2.4	2.4
Communal services	2.9	−3.5	−0.8	1.7	−1.8	−0.4
Finance	0.2	0.5	1.3	−0.2	1.5	0.9
Other non-Government	0.3	0.6	−0.6	0.0	−1.3	−0.6
Government	7.1	1.7	0.9	3.8	2.4	2.3

[1] Growth rates for 1976 to 1980 are in 1971 prices and/or 1981 and 1982 in 1981 prices.
[2] Bulgarian shares are in constant 1971 prices. Western calculations are in 1975 adjusted factor cost.
[3] Annual average by geometric method.
[4] Estimated using 1981 values and a residual.

Sources: Unless otherwise noted Bulgarian data are from various issues of Statisticheski godishnik and Statisticheski spravochnik 1983. Western calculations are from Thad P. Alton et al, Occasional Papers Nos. 75–79 of the Research Project on National Income in East Central Europe (L.W. International Financial Research, Inc.: New York, 1983), OP–75, p. 7.

The reduced rate of value-added in Bulgarian industry in 1980 may be connected to the unusual behavior of value-added in trade in Table 1, Part I. Bulgarian statistical sources offer no explanation for such wild jumps which have no connection to changes in employment in the sector. They arise in the method of accounting for value-added from foreign trade or, more precisely, from the system of separating the internal and external prices of traded goods that Bulgaria shares with most other CMEA countries. In this case there may have been a larger increase in the internal prices of imports than in their external prices. The result would swell value-added in trade and the cost of imports to industry.[6] But it would not necessarily show up in the foreign trade statistics as an increased deficit because they are reported in foreign prices (see Table 4 below).[7] These and other oddities suggest the need to consider alternative calculations of Bulgarian performance, one whose methods are known.

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[6] It might also account for the large increase in "net material product used," shown in Table 3.

[7] In fact by estimates based on secondary sources it appears that the Bulgarian foreign trade balance in internal prices was negative in 1980, not positive as in external prices shown in Table 4.

The calculations in Part II of Table 1 not only reduce the relative weight of industry, increase that of agriculture and add a series of "nonmaterial" services. They also show a significantly different set of growth rates for the industry and trade sectors. The latter's growth largely reflects changes in numbers employed in trade. Industry's growth rate reflects published physical output series and not the double-deflation used in official series. Hence, changes in inputs to industry do not influence the series. Aside from the odd behavior of industrial output in 1980, it suggests that the official Bulgarian index overstates the growth of industrial output. The source of overstatement is suspected to be incentives in the management system to overstate the amount and real value of new industrial products.

In the Western GNP calculation Bulgaria's aggregate output is more unstable, but loses a tendency for declining growth rates. As already noted, by comparison with other CMEA countries Bulgaria grows rather rapidly.

Another aspect of Bulgarian economic performance is shown in Table 2. Except for agriculture, Bulgarian plans have been reasonably good forecasts of reported economic performance (note that sectoral outputs are gross, not net output or value-added as in Table 1). Planned growth seems to have been sensibly moderated since 1980 when the correlation between plan and actual figures is closer.

Figures already in for the first half of 1983 suggest that industry will have no trouble meeting its plan. The situation for agriculture is less promising because of crop losses due to spring drought and excessive early summer rain. Still, a rise in animal products, partly because of heavier slaughter rates for cattle and sheep, may offset crop losses.[8] Unless the trade sector again misbehaves, the Bulgarian economy will probably meet its 1983 growth target for net material product.

TABLE 2.—COMPARISON OF PLANNED AND ACTUAL PRODUCTION

[Percent growth]

Years	Net material product		Industrial output		Agricultural output [1]		Construction output [1]	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
1976–80	7.7	6.1	9.1	6.0	3.7	[3] 0.9	2.3	5.9
1979	7.0	6.6	7.8	5.5	7.0	6.0		2.9
1980	5.7	5.7	6.3	4.2	3.7	−4.5		3.6
1981–85 [2]	3.7		5.1		3.4		2.3	
1981	5.1	5.0	5.6	4.8	4.7	5.9		5.9
1982	3.6	4.3	4.5	4.6	2.2	4.7	3.8	3.1
1983	3.8		4.8		2.7		3.7	
First half: [3]								
1982				4.6				
1983				5.9				
1984	3.8		5.0		3.1			

[1] Gross output.
[2] Annual output.
[3] The average of 5 years compared to the previous 5 years.

Sources: See table 1. Plan data for 1984 are from Radio Free Europe Research, Bulgarian SR/12, 18 October 1983.

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[8] Data for the first half of 1983 are from Statisticheski izvestiia 1983/2, p. 14-15 and 24-28.

IV. PATTERNS OF RESOURCE AVAILABILITY AND ALLOCATION

The growth and structure of Bulgarian production ought to reflect more than the choice of accounting and statistics to estimate it. So behind the "real" movement of production ought to be patterns of resource availability and allocation combined with whatever seems to explain the productivity of resources. What follows is a brief description of recent major resource patterns in the Bulgarian economy. In reviewing them it ought to be remembered that they reflect outcomes that are results of Bulgarian economic policies as well as autonomous forces and events, domestic and international.

A. Final Products for Domestic Use and Foreign Trade Balances

The first concern with Bulgarian resource patterns is to estimate the domestic effects of its recent actions in paying down foreign debt balances in convertible currencies. The related question of how Bulgaria acquired the foreign exchange to do so is considered next.

Normally debt repayment requires a country to generate export surpluses in commodity trade which has the effect of reducing the net flow of final products available for domestic uses compared to their flow from national product. The amount of necessary net exports, and consequently the impact on domestic final uses of national product, depends on a country's terms of trade. If prices of a country's exports are falling relative to the prices of its imports, the real burden of paying off the foreign debt is greater. In Bulgaria's case there are some complications that may be explained shortly. These arise from more statistical problems in Tables 3 and 4.

The essential point in Table 3 is that Bulgarian production of final products grew in real terms significantly faster than did the flow of final products for domestic uses (broadly, consumption and investment) in real terms. If Bulgarian data are used, the major pressure on the economy was in 1976 through 1979. Although there is some doubt about the data in 1980, in that year and in 1981 and 1982, final products available for allocation grew as fast as those being produced.[9]

TABLE 3.—ALTERNATIVE ESTIMATES OF REAL GROWTH RATES OF THE FINAL USES OF NATIONAL PRODUCT

	1975	1976	1977	1978	1979	1980	1976-80	1981	1982
I. Bulgarian data:									
NMP produced	8.8	6.5	6.3	5.6	6.6	5.7	6.1	5.0	4.3
NMP used [1]	11.1	.3	5.2	.7	3.5	7.5	3.3		
Do. [2]						5.1	2.8	7.7	3.2
Net investment [1]	18.7	−11.5	8.9	−9.3	5.0	19.4	1.9		
Do. [2]						9.5	.1	14.8	2.2
Material consumption	7.7	6.0	4.0	3.6	3.0	3.6	4.0	5.3	3.7
Gross fixed: capital investments	17.3	.6	14.2	.6	−2.2	7.5	4.0	10.5	−5.3

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[9] By 1979 net material product probably exceeded net material product domestically utilized by a small amount in current prices. The statistical question about 1980 data arises from an unexplained change in the numbers for net investment growth that year that took place in the statistical yearbooks published in 1981 and 1982.

TABLE 3.—ALTERNATIVE ESTIMATES OF REAL GROWTH RATES OF THE FINAL USES OF NATIONAL PRODUCT—Continued

	1975	1976	1977	1978	1979	1980	1976–80	1981	1982
"Net inventory changes"	+53	−14	−40	+11	+30	+25	−2.0	+10	+35
Real final household income [3]		5.1	1.1	1.4	3.0	3.8	2.9	6.1	3.9
II Western estimates:									
GNP		2.9	3.9	3.6	3.8	−3.1	.9	3.0	2.8
Gross product domestically used		−1.6	−1.6	−2.4	1.2	−4.2	−1.7	5.5	2.8
Private consumption		3.9	−.1	1.7	1.9	.7	1.6	2.1	1.2
Selected government [4]		4.5	.4	.9	1.2	3.7	2.1	2.0	2.4
Residual [5]		−10.3	−4.7	−9.8	.4	−16.0	−9.2	14.7	5.8

[1] Based on values for 1980 given in the 1981 yearbook.
[2] Based on revised values for 1980 in the 1982 yearbook.
[3] Calculated from Bulgarian data.
[4] Including administration, justice, internal security, education, culture, health and social welfare.
[5] Including gross investment, defense and other.

Sources: See table 1. Estimated inventory changes as explained in the text.

Western estimates in Part II of Table 3 differ in suggesting that Bulgaria experienced actual absolute declines in final product flows for domestic uses. The year, 1980, also turns out different. This is possibly due to a different behavior of the values for Bulgarian net exports. The Western estimates are based on net exports in foreign prices which, in Table 4, show a large export surplus. The official Bulgarian estimates are based on internal prices of exports and imports. These may well have shown an import surplus, as already noted.

If Bulgaria had a consistent method for adding trade in rubles to trade in dollars and then a consistent linkage between external and internal prices, even one using relatively high ad valorem import and export duties, then the link between its overall foreign trade balances in Table 4–I and the different growth of NMP produced and used in Table 3–I would be found in estimates of its foreign trade prices, indices of trade in real terms and its terms of trade. What is seen is that real exports (measured in constant prices) grew much faster than real imports, for two reasons: (1) just to maintain constant trade balances in current prices, Bulgaria had to increase real export flows by 4–5 percent more each year, 1976–80; and (2) in order to generate smaller deficits (larger surplus), even more export growth was demanded.

In 1981, 1982 and possibly 1983 Bulgaria encountered a qualitatively different situation. First, most of the estimated reduction in net foreign debts in convertible currenty in 1982 can be attributed to factors other than trade flows, to lower interest rates and a higher relative value of the dollar.[10] Second, as noted, Bulgaria experienced approximately equal growth of final product flows, produced and used. Large deficits in CMEA trade were just about offset by equally large surpluses outside the CMEA bloc (assuming that Bulgarian data uses an appropriate dollar: ruble exchange rate). Finally, Bulgaria's terms of trade declined even more in 1981 and 1982 with the problem obviously in the prices of CMEA trade.

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[10] See Vanous, "Bulgarian Foreign Trade Performance in 1981", p. 5.

The apparent decline in the terms of trade may have been a major factor pulling down the growth rate of the flow of final products used in the economy. The declines in Bulgaria's apparent terms of trade have been greater than in Eastern Europe.[11] However, the real burden of Bulgarian terms of trade needs an important qualification.

B. Commodity and Regional Trade Balances

Analysis of Bulgarian commodity trade balances, as pointed out by Jan Vanous, is confused by two major problems: (1) the commodity balances are not published separately for convertible (dollar) and non-convertible (mostly ruble) trade; and (2) recently information on trade in petroleum and its products have been unpublished. Given that commodity balances are aggregated over uncertain and greatly deviating world and ruble price groups, it is less important that volume indices are missing in the commodity categories most useful for comparative analysis.

So qualified, the more remarkable characteristic of the commodity patterns of Bulgarian foreign trade is their relative stability. This has, no doubt, imparted a measure of stability to an economy which by East European standards is relatively dependent on foreign trade and particularly on imported energy and industrial materials. In turn, it must be partly attributed to the nearly half of both sides of Bulgaria's trade done with the Soviet Union, coupled with that country's stability and relative size as both market and supplier for a tiny neighbor.

General features worth noting about Bulgarian commodity balances are as follows:

(1) A very slowly growing export surplus of manufactured foods (net balances of food materials have been small and sometimes negative) reaching 1,708 million devisa leva in 1982 (over 1900 million counting raw materials);

(2) A slowly rising export surplus of consumer manufactures, reaching 508 million devisa leva in 1982;

(3) A slowly rising export surplus of construction materials, and repair and other services, reaching 168 million devisa leva in 1982;

(4) Since 1977, a very rapidly growing export surplus of machinery and equipment, reaching 1,353 million devisa leva in 1982.

Offsetting these export surpluses have been:

(5) A small and slowly growing deficit in chemicals, fertilizers and rubber of 133 million devisa leva in 1982;

(6) A somewhat larger and slowly growing deficit in agricultural nonfood raw materials, reaching 353 million devisa leva in 1982;

(7) A huge and rapidly growing deficit in fuels, minerals and metals, reaching 3,696 million devisa leva in 1982, of which the bulk, 2,626 million devisa leva, is estimated by Wharton Econometrics to be the deficit in fuels.[12]

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[11] For comparisons, see Economic Survey of Europe in 1981, p. 234 and 250. For years up to 1978 see Jackson, "Bulgaria's Economy in the 1970's."

[12] See Vanous, "Bulgarian Foreign Trade Performance in 1982", p. 4.

Behind the figures of Bulgaria's deficit in fuels lies another important connection with the Soviet Union. Wharton Econometrics has pointed to Bulgaria as the only East European country since 1978 to re-export significant portions of its crude oil imports from the Soviet Union. Their dollar sales value is estimated by Wharton to reach one half of Bulgarian exports to the developed capitalist countries, generating a critical margin of convertible currency to pay down the country's foreign debt.[13]

There remains unanswered how Bulgaria has generated the very large commodity deficits with CMEA in 1981, 1982 and apparently again in 1983. Most is with the Soviet Union, although in 1982 over 225 million devisa leva were deficit with other CMEA countries. Is Bulgaria being repaid earlier loans? Or is it receiving convertible ruble credits and, if so, why and for how long? Or are the deficits more nominal than real, perhaps representing goods re-exported through Bulgaria to non-CMEA countries or compensation for Bulgarian exports of goods capable of earning convertible currencies?

A more detailed version of Table 4 would show greatly different balances in the two main categories of Bulgaria's non-CMEA trade. Since about 1974 rapidly growing export surpluses have been earned with the less developed countries. They reached over 1200 million devisa leva in both 1981 and 1982. Only a few details of Bulgarian trade with LDCs have been assembled. It is concentrated with the Arab countries, including those in North Africa taking 80 percent of total turnover, Asian countries—13 percent, other African countries—4 percent, and Latin American countries—3 percent. In 1982, some 46 percent of Bulgarian exports were machinery and equipment, 12 percent were fuels, minerals, metals and fertilizers, while 13 percent were in foods. Also, in 1982 some 30 percent of total took the form of "geological surveys, the export of complete projects, construction works, designing and other productive activities. . . . Over 580 plants, technological lines, installations and other projects to more than 30 countries."[14]

The currency component of Bulgarian trade with LDCs remains ~~uncertain. Imports in~~ foods may generate significant earnings of convertible currency or give Bulgaria an alternative to Soviet crude oil imports. How much may be arms sales to Libya, Iran or Iraq for similar earnings is not known, and also not known is the share of the export surplus generated by Bulgarian credits or through arrangements for long term payments in industrial materials.

Bulgaria's deficits with the developed capitalist countries fell from 817 million devisa leva in 1975 to only 19 million in 1980. But then in 1981 and 1982 they jumped to over 600 million devisa leva each year. With Bulgarian exports falling slightly each year in current-price values, higher imports made the big difference.

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[13] Ibid.

[14] Bulgarian Chamber of Commerce and Industry, "Bulgaria's Trade and Economic Relations With The Developing Countries" (Sofia, 1983) pages not numbered. The same source listed more than 10 joint ventures operating in LDCs and the number of Bulgarian experts sent there reaching 6,000 by January 1, 1983.

TABLE 4.—CHANGES IN FOREIGN TRADE BALANCES

	1975	1976	1977	1978	1979	1980	1981	1982	(1983) [1]
I. Foreign trade balance (million valuta leva):									
Nominal total: [2]									
Exports	4,541.4	5,199.8	6,011.0	6,649.6	7,666.8	8,901.5	9,860.3	10,880.0	(5,568.7)
Imports	5,235.6	5,436.0	6,061.7	6,800.9	7,363.4	8,282.9	9,957.9	10,975.9	(5,726.4)
Balance	−694.2	−236.2	−39.7	−151.3	+303.4	+618.6	−97.9	−95.9	(−157.7)
CMEA trade:									
Exports	3,524.8	4,069.5	4,691.8	5,099.7	5,530.9	6,127.4	6,632.7	7,606.7	(4,239.6)
Imports	3,703.9	4,099.3	4,757.9	5,448.9	5,839.4	6,382.5	7,362.1	8,340.5	(4,676.8)
Balance	−179.7	−29.8	−66.1	−349.2	−308.5	−155.7	−729.4	−733.8	(−437.2)
II. Physical volume:									
Total trade:									
Exports	100.0	113.4	129.6	143.4	163.1	182.9	198.2	220.6	...
Imports	100.0	97.7	102.9	110.2	112.6	117.2	128.2	131.5	...
CMEA trade:									
Exports	100.0	112.3	126.8	137.9	151.0	163.3	171.8	198.4	...
Imports	100.0	100.2	109.9	119.9	122.4	123.2	124.0	129.1	...
III. Implicit price indices:									
Total trade:									
Exports	100.0	102.0	102.3	102.1	103.5	107.2	109.5	108.6	...
Imports	100.0	106.3	112.5	117.9	124.9	135.0	148.4	159.4	...
Terms of trade	100.0	96.0	90.9	86.6	82.9	79.4	73.8	68.1	...
Annual change	...	−4.0	−5.3	−4.7	−4.3	−4.2	−7.1	7.7	...
CMEA trade:									
Exports	100.0	102.8	105.0	104.9	103.9	106.5	109.5	108.8	...
Imports	100.0	110.5	116.9	122.7	128.8	139.9	160.3	174.4	...
Terms of trade	100.0	93.0	89.8	85.5	80.7	76.1	68.3	62.4	...
Annual change	...	−7.0	−3.4	−4.8	−5.6	−5.7	−10.3	−8.6	...

[1] First half of year.

[2] Values in current prices of trade denominated in rubles and dollars.

Source: Bulgarian data cited in table 1.

TABLE 5.—INDICATORS OF THE STRUCTURE, VOLUME AND IMPLICIT AVERAGE PRICES OF EXPORTS AND IMPORTS BY BROAD COMMODITY GROUPS

[In percent]

Trade category and commodity group	Share in 1975	Change from 1975 to 1981	
		Increase in volume	Increase in price
Exports:			
Producers' equipment, et cetera	33.5	138.1	4.6
Fuels, materials, components	29.1	121.9	15.8
Consumption goods:			
From crops	22.1	39.7	13.6
From animals	6.3	12.8	17.5
From industry	9.0	75.5	9.9
Imports:			
Producers' equipment, et cetera	33.1	19.2	20.9
Fuels, materials, components	54.1	31.9	62.8
Consumption goods:			
From crops	2.1	53.8	27.3
From animals	1.4	−3.9	1.5
From industry	8.9	36.9	18.7

Notes: (a) In prices of 1970. (b) "Means of labor" [Sredstva na truda]. (c) "Objects of labor" [predmeti na truda].

Source: Calculated from Statisticheski godishnik 1982, pp. 373–374.

A careful look at Table 4 shows that there has been a shift of the real volumes of Bulgarian trade away from CMEA, expecially on the export side but barely so on the import side.[15] At the same time, relative Bulgarian export prices rose slightly more in CMEA trade than in other trade. Relative CMEA prices rose much faster for Bulgarian imports than prices from other areas. Thus, it appears that Bulgaria's declining terms of trade resulted from not shifting or not being able to shift imports from CMEA, where prices were rising more rapidly, to other areas and shifting exports to other areas when CMEA average export prices were rising faster. But this is appearance only. If Bulgaria would have shifted imports of petroleum and other raw materials from CMEA (the USSR) to other areas it would not only have suffered a catastrophically large immediate decline in its terms of trade because of higher absolute import prices. It would also have made very large expenditures in convertible currency, not been able to pay off its foreign debts, and judging by Romania's case, possibly made net losses of foreign exchange by importing, refining and then re-exporting petroleum.

Table 5 gives one more view of what happened in Bulgarian foreign trade, albeit a very imperfect one because of the classifications used and the hidden differences in price movements across CMEA and other markets in each commodity category. The following changes are worth emphasis:

> Very large, but moderately growing imports of fuels, materials, etc., provided smaller, but much more rapidly growing exports of the same commodities. The declining terms of trade are partly offset because of what might be called "commodity

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[15] Trade shares are not published in constant prices. Using the CMEA trade shares of 1975 in current prices and the physical volume indices in Table 4 would suggest a decline of the CMEA export share from 77.5 percent in 1975 to 69.8 percent in 1982, while in the same period the CMEA import share barely declined from 70.8 percent to 69.5 percent.

arbitrage"; Bulgaria has been buying mostly in rubles and selling more and more for convertible currencies;

Whereas the relative shares of Bulgaria's exports and imports of equipment and industrial consumer goods just about matched in 1975, exports have grown much more rapidly in each case and, at the cost of declining terms of trade (import prices rising faster than export prices in each case);

Bulgaria's exports of consumer goods from crops and animals have provided much faster increases in export prices than have exports of final goods from nonfood industry, but, unfortunately, have had the smallest increases in volumes.

In the future, Bulgaria must either increase relatively faster export supplies of goods originating in agriculture or find a way to increase faster relative export prices of final goods from nonfood industry (both producers equipment and consumer goods). Failing at least one will almost surely force a reduced growth of imports of equipment, industrial materials and energy.

C. Investment Versus Consumption

After subtracting exports from Bulgarian national product and adding imports to the balance, there remains a final product flow that can be allocated only two ways, to investment or consumption. Naturally the division is influenced by the kinds of goods produced, exported and imported. Three alternative views of what has happened in Bulgaria since 1975 are presented in Table 3.

A warning must be sounded right off that the first view does carry some distortion by suggesting a significantly greater growth of consumption than investments in the period, 1976–80, and possibly also in 1982. According to other Bulgarian statistics, the share of net investments ("the accumulation fund") in net material product used (what is produced minus net exports) was 32.8 percent in 1975, then fell to 23.9 percent in 1978, rose to 26.9 percent in 1980 and, on an equivalent basis, to about 28.7 and 28.4 percent in 1981 and 1982.[16] What seems to have happened is that the main burden of balance-of-trade adjustments took place by 1978 by lowering net investments. After 1978 net investments moved upward quite rapidly. As a result, their overall growth, while displaying greater year fluctuations, was either absent or only half the rate averaged by consumption from 1975 to 1980, depending on which statistical series is used.

The problem with this view is that it is incomplete. Net investments leave out significant gross investment flows financed by depreciation. At the same time, material consumption ("the consumption fund") leaves out value-added in the so-called non-material sectors, in essence most services. To make matters worse, Bulgaria does not publish the more inclusive statistics as such, so other estimates need to be used to correct the view of relative investment-consumption allocations.

The figures for "real final household income" are easily derived from published per capita figures. But they are not quite total consumption because some savings are included. Still they are probably a better approximation of total consumption than are figures for material consumption. This view suggests that consumption grew somewhat more slowly from 1975 to 1980.

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[16] The problem is that prices used to measure the shares were changed from 1971 prices to 1981 prices. In the latter the shares for 1981 and 1982 were 26.9 and 26.6 percent.

A "total investment" statistic is not found in the table. "Gross fixed capital investments" are straight from the Bulgarian statistical yearbook. But they do not include investments in inventory changes (net investments, discussed above, include both net fixed capital and net inventory investments). Unfortunately, the relevant figures are not published for inventory changes. Those in the table are the author's estimates, but are probably relatively accurate.[17] Inventory investments fluctuate wildly from year to year, but grow a negative (–) 2.0 percent from 1975 to 1980. A combination of investments in inventories and gross fixed capital would show an average growth of about 2.5 for the same period, then would grow 10 per cent in 1981 and nearly 6 percent in 1982. In this view investments grow about as fast on the average as consumption from 1975 to 1980 and faster in 1981 and 1982.

Bulgaria seems to have had an investment boom since at least 1980. In 1979 fixed capital investments were down, but inventories shot up. Their rapid growth in 1982 offset another decline in fixed investments. In fact, while the five-year plan for 1981–85 called for net investments of 25 percent of NMP used, the actual figures for 1981 and 1982 (in 1981 prices) were 26.9 and 26.6 percent. Moreover, while one statement in the 1983 plan said that proportions for the division of NMP used envisaged in the five-year plan would be maintained, the actual growth of investments in fixed capital for the first half of 1983 showed over 10 percent growth compared to the same period in 1982. Now the recently published plan for 1984 calls for an over 8 percent growth. Both figures are in excess of the planned and expected growth of consumption or personal income indicators.[18]

TABLE 6.—*Changes in the structure of fixed capital investments*

	Change in share of total from 1976–80 to 1981–82 (percentage points)
I. Sector of the economy:	
Material production	–2.4
Industry	+0.7
Construction	–0.6
Agriculture	–1.7
Transportation	–0.5
Nonmaterial sectors	+2.4
Housing	+2.0
II. Branch of industry:	
Machinery and metalworking	+4.1
Electrical equipment and electronics	+1.2
Ferrous metallurgy	+3.1

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[17] The estimates are based on a combination of the actual data found in secondary Bulgarian sources through 1978, an assumption that inventories can be deflated with a price index for fixed investments, depreciation estimates after 1978 of 7.5 per cent of fixed capital stocks in the productive sectors, indices of net investments and actual values of fixed capital investments. The secondary sources are Todor Angelor, Problemi na natrupvaneto v NR Bulgariia (Sofia, 1979), pp. 46, 61, and Lalio Radulov (ed.), Sotsialnoikonomicheskata politika ha Bulgarskata Durzhava (681–1981) (Varna, 1981), p. 245

[18] Rabotnicheski delo, 11 December 1981 and 16 December 1982; Statisticheski spravochnik 1983, p. 54; Statisticheski izvestiia 1983:2, p. 1; Radio Free Europe Research (hereafter RFER), Bulgarian SR/12, 18 October 1983, p. 6.

	Change in share of total from 1976–80 to 1981–82 (percentage points)
Mining	+3.1
Textiles	−0.8
Energy	−1.0
Chemicals	−3.1
Food	−3.6
Construction materials	−4.5

Source: Calculated from Statisticheski spravochik 1983, pp. 42 and 83.

The Western estimates in Part II, Table 3, show the same relative tendencies for higher investment growth in 1981 and 1982, but definitely not from 1975 to 1980. Here the residual, estimating gross investments and defense flows, declines an amazing 9.2 percent per year for the period. If correct, it suggests the official Bulgarian statistics far understate the amount of price inflation in investment and defense goods. Where the two statistics actually differ, however, is probably on the value of Bulgaria's trade balance in 1980. Whereas the balance in external prices shows a large surplus (see Table 4), estimates of the balance in internal prices suggests a deficit. In any case, a reduction of this magnitude of investment flows would have to pull down the growth of production more than is indicated in Table 1 by the Western estimates. That is, the Western estimates may be inconsistent.

D. Allocation of Investment and Industrial Policy

Bulgaria's five-year plan for 1981–85 calls for gross investments in fixed capital of 37,000 million leva or a growth of about 20 percent over investments during the previous five years. That will be only half the percentage increase of total investments in 1976–80 compared to 1971–75. So far in 1981 and 1982 investments are slightly above the pace needed for the five-year plan.

The five-year plan also calls for 70 percent of investment in the material sector to be used for modernization, reconstruction and expansion of existing facilities. So far in 1981 and 1982 only 61 percent have fallen into this category. The economy seems to continue its chronic tendency to start too many new investment projects.[19] It was denounced in the plan for 1983 which said that planned project-starts will be reduced.[20]

TABLE 7.—ACTUAL AND PLANNED INDUSTRIAL OUTPUT GROWTH

[Gross output in percent]

Branch	Average annual growth rates			
	Actual		Planned	
	1976–80	1981–82	1981–85	1983
Machinebuilding	7.4	5.8	8.5	9.1
and electronics	13.4	12.1		
Chemicals	9.4	5.4	7.7	9.7
Energy	7.9	8.1	5.4	5.2
Ferrous metals	6.2	3.0	5.4	6.3
Construction materials	7.5	3.5	4.6	…………

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[19] Figures for the five-year plan for 1981–85 are form Rabotnichesko delo, 11 December 1981. Actual investments are from Statisticheski spravochik 1983, pp. 43 and 65.

[20] Rabotnichesko delo, 16 December 1982.

TABLE 7.—ACTUAL AND PLANNED INDUSTRIAL OUTPUT GROWTH—Continued

[Gross output in percent]

Branch	Average annual growth rates			
	Actual		Planned	
	1976–80	1981–82	1981–85	1983
Light industry			4.6	3.6
Textiles	5.0	4.9		
Clothing	2.7	3.6		
Leather	2.2	5.4		
Glass	6.6	4.0		
Food industry	2.4	4.8	4.0	4.5

Sources: Rabotnichesko delo 11 December 1982 and 16 December 1982; Economic Survey of Europe in 1982; Statisticheski Spravochnik 1983, p. 85.

The only indication of sectoral allocations for investment in the five-year plan calls for 73 percent of the total flow in the material production sectors of the economy, a slight reduction from the 74.2 percent realized in the 1976–80. In this regard in 1981 and 1982 the actual shares are slightly under the planned ones.

In the absence of other information on plans, Table 6 sets out information suggesting the shifts in investment allocations that have taken place in 1981 and 1982 compared to the pattern in the previous five years. The non-material sectors, especially housing, are acquiring larger shares (and apparently larger than planned shares). Agriculture's share of investment seems to be falling. Although absolute annual investments in the sector are flowing at about 7 percent above comparable levels in 1976–80 this may be offset by changes in investment prices.

The shifts in the pattern of investments within industry so far only very roughly suggest the pattern of planned output growth in 1981–85 compared to that realized in 1976–80 and already in 1981 and 1982.

Bulgarian plan announcements have stressed that development priority will still be given to industry even though the overall planned growth rate, 5.1 percent per year, is lower than that planned (9.2) or achieved (6.0) in 1976–80.[21] An important change in plan priorities seems to be that the growth rates for Groups A and B, respectively the "means of production" and the "means of consumption", are to be approximately equal in 1981–85. In 1976–80, Group A grew 7 percent per year, while Group B grew only 4 percent per year. Actually 1981 and 1982 have seen an even greater shift with B averaging 5 percent and A only 4 percent. However, if 1983 plans are met (see Table 7) the situation will change.

More broadly, plans stress not surprising elements such as the need to have more efficient use of energy and raw materials and rapid growth of more technologically advanced elements of all branches, new types of machines, robots, electronics and computers, ceramics, synthetics, new consumer goods, etc.

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[21] See Table 2.

E. Agriculture and Labor Force

Bulgaria's agriculture had been planned with a gross output increase of 20 percent of the period 1976–80 compared to 1971–75. Only 11 percent growth was realized, a shortfall which surely cost the country foreign exchange. With animal production up 22 percent, crops with a small 4 percent growth were the problem.

Planned growth of gross output for 1981–85 over 1976–80 is 18 percent for total and 17 percent for animal production (note the similarity of planned growth of the food industry, 20 percent). In 1981 and 1982 annual plans for output growth were more than fulfilled (see Table 2), but a comparison of their levels with five years earlier shows them slightly behind the growth needed to fulfill the targets for 1981–85. The share of animal production in total output, which had risen to 45.3 percent in 1976–80 (over 41.3 percent for 1971–75), remained at about that share in 1981 and 1982 combined.[22]

Agricultural output will grow little if any in 1983. Crop production received a double blow. A winter-spring drought reduced wheat production so wheat imports were necessary. Then early summer rains damaged both fruit and some fresh vegetables. Still by mid-summer consumers in Sofia seemed reasonably well-supplied. However, queues still formed during the busy times of day, especially on the edge of the city. Also, quality was often poor with spoiled produce usually mixed with the good. By mid-year milk and egg production were up 9 and 14 percent. Meat purchases were up 8 percent, possibly due to a reduction of cattle and sheep herds (although numbers of pigs and fowl had increased).

Bulgaria's five-year plan in agriculture stresses more intensive grain production with an accent on greater and more stable output of maize. Fodder supplies remain a major problem. As means to this end the plan calls for more and better irrigation, better equipment and its more intensive use, better crop rotation and improved methods of cultivation. Although few numbers are given, Bulgarian plans probably intend to continue the process of substituting more capital for less labor; also, labor is to be improved in quality and supplemented by encouraging part-time or weekend work by pensioners and persons engaged full-time in other sectors. As happens elsewhere in Eastern Europe, Bulgarian pupils and students are mobilized for harvest.

TABLE 8.—CHANGES IN LABOR FORCE AND LABOR PRODUCTIVITY

	1976	1977	1978	1979	1980	1981	1982	1983
I. Thousand persons: [1]								
Total occupied	4,312	4,287	4,296	4,335	4,364	4,418	4,435	....
Material sectors	3,610	3,587	3,589	3,618	3,623	3,665	3,670	....
Industry	1,458	1,466	1,486	1,514	1,536	1,578	1,593	....
Construction	348	354	359	360	357	361	364	....
Agriculture	1,130	1,085	1,057	1,056	1,037	1,023	1,006	....
Nonmaterial sectors	703	700	708	717	741	753	765	....

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[22] Published statistics are confusing because the basis for measuring shares shifted from prices of 1971 to prices of 1982. In the latter relative prices of animal products were raised. For 1980 the animal product share is 47.8 percent in one case and 53.0 percent in the other.

TABLE 8.—CHANGES IN LABOR FORCE AND LABOR PRODUCTIVITY—Continued

	1976	1977	1978	1979	1980	1981	1982	1983
II. Annual growth (percent):								
Total occupied	0.21	−0.58	0.21	0.91	0.67	1.16	0.38	....
Material sectors	−0.44	−0.64	0.06	0.81	0.14	1.16	0.14	....
(Planned)						(0.3)	(0.1)	(−0.1)
Industry	1.32	0.55	1.36	1.88	1.45	2.73	0.95	[2] [0.88]
Construction	0.87	1.72	1.41	0.28	−0.83	0.28	0.83	....
Agriculture	−4.88	−3.98	−2.58	−0.09	−1.80	−1.35	−1.66	....
Nonmaterial sectors	3.84	−0.43	1.14	1.27	3.35	1.62	1.59	....
III. Growth of labor productivity (percent):								
Material sectors	7.0	7.0	5.5	5.7	5.5	3.9	4.2	....
(Planned)	(8.8)	(8.1)	(6.7)	(6.7)	(5.4)	(4.8)	(3.5)	(3.5)
Industry	5.8	9.3	9.9	3.4	−1.1	3.3	6.3	[2] [4.7]
Construction	−0.1	9.7	2.1	2.9	5.0	7.0	4.7	....
Agriculure	6.9	−9.8	2.7	10.2	−18.8	5.9	7.3	....
IV. Share of growth of net material product attributed:								
To increased productivity	107.2	109.8	99.1	87.5	97.6	78.8	96.4	....
To increased labor	−7.2	−9.8	0.9	12.5	2.4	21.2	3.6	....

[1] Calculated on the basis of absolute figures given for 1970 in Razshireno sotsialistichesko vuzproizvodstvo v NRB (Sofia, 1971), p. 23, and 25 godini aprilski plenum-sotsialno ikonomicheskii vuzkhod na NR Bulgaria (Sofia, 1981), p. 138, with growth rates and ratios given in the statistical yearbooks.

[2] First half of the year compared to the same period in 1982.

Table 8 shows the steady decline of persons occupied in agriculture which was only partially stemmed by measures in 1979 to "stabilize" agricultural labor.[23] During 1976-80 the number of occupied persons was 19 percent less than in the previous five years. Their reduction was offset by real fixed capital investment flows 24 percent greater. In the most recent two years, occupied numbers have averaged 5-6 percent less than in 1976-80, while investment flows averaged a little over 7 percent more.[24] Despite these changes, capital per occupied person in Bulgarian agriculture was in 1982 only 43 percent of that in industry, a lower relative capital intensity than recorded in 1979 and 1980. Capital measurements do not, of course, include the nature of land, only the values of permanent orchards and vineyards. Even with land's influence, net material product per occupied person remained in agriculture only 59 percent of that in industry in 1982. It was only 50 percent in 1975 and 1980. In as much as these figures are in current prices, they must be seen as reflecting not only relative productivity, but also income and price policies.[25]

The productivity changes shown in Table 8-III are measured in constant prices. While subject to numerous qualifications already made concerning the measurement of national income, they suggest that a major problem in Bulgarian agriculture is the great instability of value-added which has a source the region's climate mixed with the agricultural system's poor responses. That problem is probably partly a result also of a qualitative deterioration of the work force in agriculture as the best of workers and most young people move to the towns and cities searching more stable income and "the better life."

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[23] See, Jackson, "Bulgaria's Economy in the 1970's," pp. 586-7 Wages per worker in agriculture have fluctuated as a percent of average wages as follows: 1975-94.3, 1980-90.6, 1981-92.9, 1982-93.5.

[24] Bulgaria's share of labor occupied in agriculture is now only slightly above that in Hungary, while numbers occupied per 100 ha. of agricultural land has now reached about the same levels in Bulgaria, Hungary, Czechoslovakia and the G. D. R.

[25] Relative output per occupied person in agriculture compared to industry has been relatively high in Bulgaria compared to other CMEA countries, at least when comparisons are done in their own national accounts. See, Jackson, "Bulgaria's Economy in The 1970's," pp. 575-576.

Some quantitative relief of labor-supply constraints may come from the now slightly larger age cohorts moving into the age of work, but will be slight and only temporary given present propensities for birth among Bulgarian women.[26] Concern with this long-run supply has recently provoked consideration of new pro-natalist policies by the government.[27]

In the near term Bulgaria needs to stimulate the productivity of a pool of labor of roughly given numbers. Even by 1985 only half of the persons aged 18 entering this pool will have been born in urban places. One may wonder how quickly, in any case, can this still-forming urban proletariat have its productivity raised to Western European standards. Some possibilities for doing so were enumerated by state and party leader Zhivkov recently in a major speech on proposals for a new labor code for Bulgaria.[28] Still 66.8 percent of the country's industrial workers do not have secondary education; for those age 30 and under, the share is still over 40 percent. Significant numbers who have received higher and specialized secondary education do not work in their fields of specialization. The loss of working time in industry and construction due to idle time, both whole and part days, absenteeism and failure to report with permission has been nearly 8 percent of the occupied work-force. In 1981 the percentage leaving jobs was 28.8 in industry and 35.1 in construction (including 32,000 who left without notice and permission). Besides more training and education, better balance between education and job demand, reduced idleness and absenteeism, and higher stability, Zhivkov suggested making use of the 131,644 women aged 55–60 and the 691,266 persons aged 60–70 who are counted among the legally retired.[29] Specially recommended places for them are in services and agriculture, either on personal farms or on the auxiliary farms of enterprises recently encouraged by laws promoting self-sufficiency in food production at the district level.[30]

In the 1980s Bulgaria's agricultural organization will no longer have essential contributions from cooperative or collective farms. They have all but disappeared within the agro-industrial complexes. On the other hand, the role of private, personal and auxiliary farm activities may expand moderately. They have been given emphasis in the campaign for more local self sufficiency in food production since 1979.[31]

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[26] At the end of 1981 Bulgaria's population had 607,008 persons aged 15–19, 642,477 aged 10–14, 678,952 aged 5–9 and only 647,141 aged 0–4.

[27] The measures discussed by Prime Minister Filipov on 11 February 1983 included both positive financial incentives to families and women and negative incentives, not only taxes but also possible discrimination in job-promotion and access to state owned housing. Rabotnichesko delo, 14 February 1983 [also see the discussion in (RFER), Bulgarian SR/14, 25 March 1983]

[28] Rabotnichesko delo, 3 December 1982.

[29] Even with earlier retirement women are now 49 percent of all workers and employees in Bulgaria.

[30] Additional background on labor quality can be found in Jackson, "Bulgaria's Economy in the 1970s," pp. 586–588. Discussion of the food self-sufficiency measures can be found there (p. 616) and in Radio Free Europe Research, Bulgaria SR/4, 5 March 1981, and RAD Background Report/175 (Bulgaria), 29 July 1983.

F. Personal Income and Consumption

The slowdown in growth of output combined with the effort to reverse balance of payments deficits brought smaller increases in virtually every indicator of personal income and consumption in the second compared to the first half of the 1970s. Real wages averaged only 0.6 percent increase from 1975 to 1980 compared to a 3.0 percent average increase from 1970 to 1975. A broader category, real income per capita, grew only 2.5 percent per year compared to 5.7 per year percent in the same periods. Similar changes could be found in most consumption indicators; for example, the average annual rate of growth of retail trade per capita fell from 7.4 percent to 3.6, social consumption funds per capita from 8.1 to 4.9, and automobile sales from 24 percent to 4.1 percent. They rose from only 22,000 units in 1970 to a peak of 83,445 units in 1978 and from only 2.9 percent of non-food retail sales to 9.2 percent in the same period. In 1970 only 6 out of every 100 Bulgarian households had an automobile; by 1975, 15 did and by 1981 that figure doubled to 30. While housing construction from 1976 to 1980 did grow faster compared to 1971–75 than it did in that five years compared to five years earlier, living space per urban dweller rose an average of only 2.8 percent from 1975 to 1980 compared to 4.1 percent from 1970 to 1975.

The pressure on consumers seems to have culminated in 1980. That year had a bad harvest. Overall meat sales per capita declined 3 percent, falling below the level recorded in 1976. Real declines in public catering of 1.0 percent and 3.5 percent took place in 1979 and 1980, while the latter year also registered a decline in total retail sales of nearly one percent. Automobile sales declined slightly in 1979 and then 7 percent in 1980.

Given events elsewhere in Eastern Europe it is not a surprise that Bulgaria's leaders took measures to remedy supplies. This concern seems to have been exhibited as early as May, 1980, in a major Zhivkov speech on the subject.[32] Still, as the statistics suggest, not much seems to have been done that year. It was more noted by the poor harvests and by increased consumer prices averaging nearly 25 percent on state retail food sales and over 16 percent in cooperative markets.

A sharp rise in real consumption and income indicators did take place in 1981, but followed by slower growth in 1982. Meat consumption jumped 8.8 percent in 1981, then only 3.0 percent in 1982. Housing plans were not fulfilled either year although, as already noted in the section on investment, housing finishes have held up relatively well. On the other hand, automobile sales in 1981 were

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[31] By 1982 there were 4,250 auxiliary farms or enterprises whose output supplied 52 percent of the meat and 57 percent of the vegetables used by the respective canteens. From Ikonomicheski zhivot, 23 February 1983, p. l. as cited in RFER, RAD Background Report/175 (Bulgaria), 29 July 1983. Also see RFER, Bulgarian SR/4, 5 March 1981, p. 3.

[32] An unpublished speech at a conference in Ruse reported in RFER, Bulgaria SR/12, 10 September 1981.

33 percent below the peaks in 1978 and rose only slightly to the level of 1976 in 1982.

One would like to say more about the balances between (1) money incomes and the stocks of liquid assets, both balances in savings accounts and currency in hand, and (2) current means to absorb this purchasing power, including current supplies and prices of consumer goods and services, policies for financing durable goods (especially housing), interest rates and tax policies. Unfortunately, Bulgaria does not publish the figures for currency in circulation and there is no easy way to estimate them.[33] End-year balances in saving deposits rose an average of 13.5 percent from 1970 to 1975 and then only 7.1 percent per year from 1975 to 1980 and 7.4 percent in 1981. By contrast, the undeflated values of retail sales rose about 8 percent per year in both periods.

Slower growth rates of 4.1-4.2 percent for retail trade and 2.8-2.5 percent for real income per capita took place in each of 1983 and 1984. These are about the same growth rates as realized for the period 1976-80. However, their lower level appears the result of unusually high growth rates of investment in fixed capital, not a reduction of the country's balance of trade deficit with CMEA and the developed capitalist countries. Their rise was less in 1981, only 5.1 percent, and still slightly lower, 4.8 percent, in 1982. Major increases of official state retail prices are still rare, 4.6 percent in 1979, a large 14.0 percent in 1980, hardly any change in 1981 and 1982 and then another in May, 1983, whose dimension is not known. In spite of these increases and their effect of making negative real interest rate on savings, saving balances still rise and by 1981 equaled 120 percent of non-food retail sales that year. But whether this level of liquidity harms labor incentives is not known.[34]

There may be coming significant changes in the way future increases in consumption are to be financed and supplied. Already in 1981 and 1982 the growth of real wages was up relatively to other categories of income, suggesting an emphasis on earned income. The district self-sufficiency program may see a further rise of sales in the cooperative markets. They had sagged to only 55 percent of the 1970 level in 1976, but jumped sharply in 1980 and in 1981 were up to 86 percent of 1970 levels. Laws have given some new status to private production, not only of food, but of artisan and tourist services.[35] Enterprises and other economic organizations will not only be expected to provide more food through canteens and auxiliary farming, but also to provide greater shares of housing by helping their personnel in finance and construction.[36]

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[33] The only published data on household income and expenditures do not separate money and natural flows. They are based on sample data which do not always match other statistics. For example, in 1977, 1979 and 1981 they indicate a net withdrawal of savings deposits while balance of the savings bank shows the same balances increasing.

[34] One would guess that any excess liquidity could be taken up by simultaneously increasing real allocations for house construction and shifting more of the burden of financing to the Bulgarian consumer. Another way, actually proposed recently, is to sell abandoned village houses for weekend and vacation homes. See RFER, Bulgarian SR/13, 4 March 1983, p. 9.

[35] See RFER, Bulgaria SR/8, 10 July 1980, and RAD Background Report/175 (Bulgaria) 29 July 1983.

[36] A major statement on consumption and income is given by Filipov in Rabotnichesko delo, 14 February 1983. Also, see RFER, Bulgaria SR/10, 12 September 1983.

G. Summary Comments on Growth and Resource Allocation

A number of features of Bulgaria's recent performance and quantitative dimensions of policy remain clouded by the inadequacies of published statistics. The balance of payments is not published. Price and quantity movements in foreign trade balances by commodities are confused by mixing trade in the two payments and price blocs. Connections of ruble and dollar trade values to domestic production and income balances are not known. Relative movements of investment and consumption are distorted by statistics on material consumption and the "accumulation fund" (net investment in fixed capital formation plus changes in inventories). Finally, balances between the value of goods and consumer liquidity are hidden by the lack of data on currency in circulation. Explaining these statistical problems may try the patience of a casual reader, but it is better to do that than it is to leave the chance of a mistaken judgment.[37]

Those chances are great enough in any case when one looks for connections and possible causation in anything as complex as a national economy with only one set of eyes. Both more eyes and a computer model will make for more accurate and clearer understanding of both structural relations and policy effects in the Bulgarian economy. Such a project is underway at Arizona State University and hopefully will receive cooperation in Bulgaria. The country can only gain by clearer understanding abroad of how its economy functions.

The major event in Bulgaria's economy in the period 1979–80 was the shift of its overall trade balance from a 694 million devisa leva deficit in 1975 to a surplus of 620 million devisa leva in 1980. The resources for this change came partly with a rise in Bulgaria's trade deficit with CMEA. That trade supplied vital crude oil imports that were converted to dollars. The burden of turning around the trade deficit was greater because of the steady decline in Bulgaria's terms of trade. Real resource flows grew less rapidly to both investment and consumption, but by differences which are hard to measure with available statistics. Investment could have grown as fast as consumption, but probably grew somewhat more slowly. It certainly grew more erratically.

Although Bulgaria is estimated to have reduced its foreign debts in convertible currency in 1981 and 1982, this seems to have been done without as much pressure on internal supplies. Large trade deficits, over 700 million devisa leva, were generated with CMEA each year. And after virtually balanced with the developed capitalist countries in 1980, Bulgaria's deficits rose to over 600 million devisa leva in each year 1981 and 1982. Real consumption rose a healthy 5–6 percent in 1981 following conditions of tight supplies in 1980. But real investments jumped even more in 1981. In 1982 real fixed investments declined absolutely, but total investments increased, driven up by a large increase in producers inventories (probably by as much as 30 percent).

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[37] A useful review of recent legislation on "state secrets" is in RFER, Bulgarian SR/12, 24 September 1980.

In 1983 and 1984 plans hold consumption growth to rates averaged in 1976–80. But fixed investments rose 10 percent in the first half of 1983 (compared to the same period in 1982) and are planned to rise 8 percent in 1984. This investment growth rate is hardly appropriate if Bulgarian planners expect to reduce balance of payments deficits. They must, then, expect continued support from the CMEA deficit and probably to continue the deficit with developed capitalist countries.

V. Economic Reorganization—The "Economic Approach" to Administration and the "New Economic Mechanisms"

At the time of writing the last report on Bulgaria for the Joint Economic Committee there was barely visible a serious effort to restructure the Bulgarian economic system by the application of what is called "the economic approach and its mechanism" or more simply "the new economic mechanism." [38] The intention to develop and apply a new approach as well as some of its basic principles were announced at the National Party Conference in April, 1978. Applications came first in agriculture in 1979 and by separate decrees in other sectors during that year and 1980. By the end of 1981 the rules were standardized, with special applications in agriculture, and then applied across the Bulgarian economy beginning January 1, 1982.

The "economic approach and its mechanisms" clearly are not intended by Bulgarian leaders to introduce market socialism although it is intended to strengthen the role of "commodity-relations" especially among economic organizations. Tudor Zhivkov said it was "to have nothing in common with the conceptions for the spontaneously functioning market mechanism." [39] The new arrangements are intended to improve the quality and even the scope of decentralized decision making by greater and more consistent application of the old idea of "economic accounting" [khozraschet in Russian or in Bulgarian, stopanska smetka]. At the same time the new system is said to strengthen planning. Planning, clearly much of it still to be in physical and engineering terms, remains to set the major outlines of resource commitments to centrally determined objectives and to balance sources and uses of major commodities and commodity categories. What is critical in the new system is (1) the translation of planning categories into financial categories and financial transactions, (2) the financial identification of the outputs produced and the inputs used by each economic unit, and (3) the connections of the financial consequences of unit activity either as total income or net income to the values of wages and salaries. *The most important change so far in the system, in the opinion of this writer, is that wages and salaries are no longer based as much on the degree of plan fulfillment, but more on performance compared to the previous year.*[40]

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[38] See Jackson, "Bulgaria's Economy in the 1970's," pp. 613–617.

[39] Otchet na Tsk na BKP pred Dvanadesetiia kongres i pred stoiaschite na partiiata (Sofia, 1981) p. 333.

[40] There still remain numerous income sources for organizations and individuals which are tied to plan indicators.

Bulgarian authorities probably wouldn't mind any close parallel being drawn between their new system and the idea of corporate management by internal profit centers. They would wish at least the following qualifications: (1) affairs among the corporations in Bulgaria are centrally controlled by planning, by price-controls and by review of profits, and (2) the interests and responsibilities of the working personnel are integrated into the affairs of each corporation.

The following is an attempt, full of risks of oversight, to identify the most interesting parts of the new Bulgarian system based on a reading of the legal document setting it out called, "Rules for The Economic Mechanism." No attempt is made at this time to consider special "rules" recently elaborated for agriculture, local organizations or engineering-innovation organizations.[41]

A. Units of Organization

1. THE "ECONOMIC ORGANIZATION"

The "economic organization" [stopanska organizatsiia] is the focus of the new system. According to Article 90, it is "any organization, which on the basis of socialist property, state plan tasks, and its own counter plan, performs economic activities on the strength of a labor collective, works on economic accounting and is a juridical person." An "economic organization" may have subordinate enterprises which are also juridical persons and units which are formed jointly with other "economic organizations."

Articles 97, 98 and 100 appear to give "economic organizations", whose primary function is production, the right to organize the production of many categories of goods and to organize their own units for research, engineering-innovation, supply and sales (including retail trade), and foreign trade. The right to sell at retail is also given to agro-industrial complexes. "Economic organizations" in wholesale trade may organize some categories of production.[42] As alternative to subordinate units, activities may be contracted with specialized "economic organizations." Only when the subordinate unit is to have juridical personality is it necessary to receive approval of high authorities (Article 103).

Among those considered "economic organization" are the 281 "agro-industrial complexes" making a "national agro-industrial complex" headed up by the National Agro-Industrial Union (which has replaced a ministry of agriculture). The designation of territorial units is less clear; district [okruzhni] peoples' councils (Articles

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[41] The "Rules" form the larger part of Council of Ministers Decree No. 53, 31 December 1981, and is published (among other places) in a booklet, Ikonomicheski mekhanizum, Normativni aktove (Sofia: Nauka i Izhustvo, 1982) some 290 pages long. The booklet also details the new provisions for agriculture, engineering-innovation organizations and contracts.

Decree No. 53 was announced on 30 December 1982 and first publically discussed in January—See Rabotnichesko delo, 30 December 1982 and 15 January 1982. For a discussion in English see RFER, RAD Background Report/20 (Bulgaria) 26 January 1982.

[42] The Central Cooperative Union, long in charge of cooperative retailing mostly for villages and once, from 1967 to 1970, also combined with cooperative farming and, since 1971, with producers cooperatives, recently has also been urged to increase its production base. (See RFER Bulgarian SR/15, 4 December 1981. It also seems that the Cooperative Union has acquired responsibilities in promoting the use of abandoned land for personal farming which only recently was assigned to the agro-industrial complexes. (See RFER, Bulgarian SR/6, 24 March 1982, p. 15.)

330) are considered self-directing and self-financing, as are communal councils.

The "Rules" create possibilities for some kinds of competition to develop among "economic organizations."[43] At present there are some 2,135 enterprises in Bulgarian industry ranging from only 5 in ferrous metals to 442 in machine-building and metalworking and 304 in the food industry. How many "economic organizations" are defined among them is unknown. And how much they might compete depends on numerous factors, not the least of which will be the influence of the branch ministries and the allocations of investment funds.

2. THE BRANCH MINISTRIES

The first twenty articles of the "Rules" redefine the functions of both "function" ministries and state committees and "branch" ministries. By Article 5 the branch ministries are placed back on state-budget financing, reversing a condition since 1976 when they were placed on economic accounting. Branch ministries are granted a "fund for technological progress and investment," while the Ministry of Domestic Trade and Services is granted a "fund for trade policy" in leva and foreign currency. Average wages of persons in the central administration of ministries are limited in growth to not more than (1) wages in economic organizations of corresponding branches for branch ministries and (2) wages in the economy as a whole for the functional ministries.

Although the branch ministries remain with many ways to influence individual "economic organizations," including setting plan targets and allocations of investments, the intent of the new system is to define their function as overseeing a set of branch activities as a whole and not the direct intervention in the affairs of producing or trading organizations. Changing the ministries to budget financing suggests their output is seen as a public good. Concerning the separation of ministries and "economic organizations," it is interesting to note one function of the "Bulgarian Industrial Economic Association" [Bulgarski industrialna stopanska asotsiatsiia] set up in April, 1980, with its chairman, Ognyan Doynov, member of the Bulgarian Communist Party politburo. Itself an economic organization set up by more than 150 enterprises, the Association was described as having a main function of "defending" the interests of members in front of the government (including the branch ministries).[44]

If economic organizations need defending from branch ministries, the new system seems to recognize their potential for monopoly behavior. Among the obligations imposed on branch ministries (Article 10) is "to remove and prevent manifestations of abuses from a monopoly position in the internal market of the country by individual socialist organizations and their subordinates, and to place in the state budget profits incorrectly received."

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[43] A possible tendency in the opposite direction is represented by a 1977 decree and its subsequent modification in 1981 to promote local self-sufficiency in basic food. This effort also includes greater use of unused land in private, personal and auxiliary farms (the latter is one undertaken by employees of a non-agricultural enterprise). RFER, Bulgarian SR/4, 5 March 1981.

[44] The association is described in an English language pamphlet Bulgarian Industrial Association 1981 published by it in Sofia, although the functions set out there have recently been changed. It is also discussed in RFER, Bulgarian SR/12, 23 July 1982.

3. THE ENTERPRISES

"Enterprises" remain as basic organizational units either as "economic organizations" in their own right or as subordinate units. The "Rules" define them in 15 articles, one of which lists the obligation of an enterprise as a subordinate unit to transfer to the superior economic organization up to 80 percent of its depreciation allowances and up to 60 percent of its income collected in a "fund for expansion and technological improvement."

4. THE BRIGADES

The most interesting sub-unit described in the "Rules" is the brigade. The brigade has been emphasized as a basic organizational unit since the early 1980s, especially in agriculture.[45] In the "Rules" a brigade is defined as "the elemental [or primary] production, economic and social unit of the economic organization." It is suggestive of the basic team in a production process or even a unit conceived like the "basic organizations of associated labor" defined in Yugoslavia. In 1982 there were 34,084 brigades in industry, an average of about 16 per enterprise, and each with an average of 27 workers. The important addition of the new economic mechanism is its stress of brigades on economic accounting. In 1982 some 63 percent of brigades, covering 75 percent of workers in brigades, were on economic accounting. Brigades also are to prepare counter plans and face a requirement that their wages fund is a residual after deduction of operating costs.

B. The Financial Rules

1. INCOME-EXPENDITURE FLOWS OF ECONOMIC ORGANIZATIONS

Economic organizations are expected to generate sufficient income through domestic and foreign sales of goods and services to pay for purchases from other economic organizations or imports, depreciation of their own capital, the servicing of credit, the generation of flows to the state and local budgets, capital expansion and technological improvement, workers' facilities, and finally wages and salaries. An important provision of the economic mechanism is that the wages fund [fond rabotna zaplata] is a "residual quantity" [rezultativno-ostatuchha velichina] (see Article 289).

Total profits [suvkupnata pechalba] of an economic organization is the difference between its money receipts and its full costs of products sold, including its own marketing costs (Article 178). From total profits economic organizations pay (1) turnover taxes, (2) profits taxes, (3) contributions to communal peoples' councils, and (4) installments and interest for working capital credits (Articles 179). The profits tax is envisage as the major source of contributions to the state control of economic development. The normatives established for 1982 placed economic organizations into six groups, each of which pay a different rate of profits tax beginning with 20 percent and rising by increments of 10 percent to 70 percent.

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[45] For more background on brigades in agriculture see RFER, Bulgarian SR/9, 24 July 1980.

Specifically exempted from the tax were profits earned by services to households, by agricultural organizations and by engineering-innovation organizations. Deductions to communes were set a 3 percent of profits (Decree 53–1981, Articles 2 and 4; parts of Article 2 and Article 3 of this decree were not published).

From the remaining net income economic organizations are to form the following money funds: (1) "expansion and technological development," (2) "economic risk," (3) "social-residential and cultural measures," (4) "foreign currency," (5) "stimulation of technological progress," (6) "expenses of management " and (7) wages (Articles 169 of Rules). Minimun contributions to these funds are established by norms of higher authorities. Funds remaining in them at the end of the year carry over to the following year and are not subject to confiscation or centralization.

By the norms of 1982 the "fund for expansion and technological progress"was formed from profits at a minimum rate of 4 percent of total income (not total profit). The Fund also receives depreciation allowances and sums from the liquidation of capital assets. It is to be used mainly for investment, but can also cover research and the training of cadres. The Fund can not be used to cover current expenses or wages (Article 170).

The "fund for economic risks" was formed by a 2 percent deduction of profits in 1982. It can be used to cover expenses connected with "production-economic risk" (not further defined), shortages in the wages fund (discussed below) and payments for unfulfilled contract obligations (Article 171).

Two sources supply the "foreign currency fund."[46] In 1982 one per cent of all foreign currency receipts were to flow into the fund, of which 10 per cent was turned over to district peoples' councils. In addition, 50 per cent of foreign currency receipts over state plan targets went into the fund. Although subject to numerous qualifications, it could be used for imports of commodities, licenses, etc. and foreign currency expenditures for advertising, foreign travel, repayment of foreign currency credits, etc. (Article 173).

An important point to remember in the new system is that funds are to be used for the benefit of the economic organizations that accrued them. However, this does not mean that the funds can be freely spent. Expenditures are not only subject to bank scrutiny for their stated purposes. They are also subject to limits for approval in all activities, as, for example, those explained for investments below.

2. BUDGET AND CREDIT FUNDS

Article 63 indicates that funds from the state budget may be used for (1) "speeding the introduction of scientific-technological progress," (2) "capital investments," (3) "current production activities," and (4) "stimulating the development of economically weak and backward regions." Some budget funds may flow through branch ministries.

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[46] Foreign currency funds were set up as early as 1971 when organizations producing for export or undertaking foreign trade activities were permitted to keep part of their over-plan receipts, from 5 to 20 per cent for rubles and from 10 to 50 per cent for convertible currencies. Milan Petrov, "Roliata na valutnata stopanska cmetka v usloviiata na ikonomicheskiia podkhod", Planove stopanstvo 1983:3, p. 47. This article surveys a number of questions concerning the application of "economic accounting" in foreign currencies.

Economic organizations also may make use of bank credits. But credits (in money or goods) between them is permitted only in strictly defined cases. In general, bank credit (in leva or foreign currency) is granted on the basis of economic effectiveness and to this end banks are to organize, with the assistance of the branch ministries, "competition" among the units requesting credits (Articles 65 and 69). Credits for capital investments may not be granted for longer than 10 years and require at least a 35 percent contribution of the investor's own funds. Bank credit for wage payments must be repaid within 3 months (Article 72).

3. INVESTMENT FUNDS

Article 164 gives economic organizations the right to plan and execute, without competition (see above), capital investments within the framework of their free funds in the following cases: (1) modernization of capacity, including acquisition of machinery, if the project can be carried out in less than 12 months; (2) projects that can be undertaken by the organization's own forces (over 75 percent of construction-installation work) provided the recoupment is within 3 years; (3) the acquisition of equipment for projects included the national program for introduction of scientific-technological progress, provided the recoupment period is no longer than 3 years; and (4) construction of facilities from the "fund for social-residential and cultural measures."

The latest available information on sources of funds for capital investment only go through 1981 and hardly are indicative of effects of the new system. That year budget sources covered 28 percent, a share that remained steady since 1978. Bank credits dropped to 28 percent while investors own funds rose to 45 percent. Both were trends continued since 1978.[47]

Regardless of sources, investments will continue to be approved by higher agencies (Articles 155–164). The Council of Ministers is to approve a nominalized list of projects of greatest national importance. It also continues to determine limits for ministries and the other control agencies for approval of other investments. Branch ministeries, in turn, will continue to approve general limits for investments of the economic organizations, including those done without competition.

4. WAGES

The limits on wages of branch and functional ministries have been noted above. The wages fund of economic organizations, as a residual fund, might decline from one year to the next, but subject to qualifications listed below. Upper limits are also set in the following ways: (1) the growth from one year to the next depends on the growth of income from one year to the next (in 1982 the ratio was set of up to 0.5 percent for each one per cent growth of income;

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[47] Statisticheski godishnik 1982, p. 466.

also, different norms were set for each per cent increase in labor productivity); (2) the wages fund can also be supplemented by part of the savings of material expenses per unit of output compared to the previous year (in 1982 the maximum allocation of such savings was 30 percent; (3) the wages fund is also increased when the number of employees is increased compared to the previous year when, such employment is from new capacity or increased shift work (in this case, the resulting increase in output is calculated separately).

The "Rules" also set limits for the maximum growth of average (per person) gross wages and separate limits for the growth of administrative salaries. For the latter, growth depends on "normatives established on the basis of state plan tasks" for "total profits" [suvkupnata pechalba] and applied without change for each year of the five-year plan (Article 190, part 2).

In case funds for wages are insufficient, supplementary sources for productive workers and clerical personnel in administration are provided in Article 190, part 3 and Articles 191 and 192. But management cadres and specialists in administration have no guaranteed minimums (190, part 3 and 192, part 3).

C. The Price System

Increased emphasis on self-financing of economic activities through money income generated by the sale or transfer or output gives a greater influence in the allocation of resources to the system of prices. The price system outlined in the "Rules" is relatively complicated. It covers 19 articles and some more in special cases like foreign trade. The basic points are as follows:

1. BASIC PRICE CONCEPTS

Prices are to be based on normative expenditures and normative profits, with deviations in categories of goods according to documents of standardization (Article 33). "Speculative increases" are specifically excluded (Article 32), as are increases from a monopoly position (see above under obligations of branch ministries). Exceptions are permitted for goods in excess demand, when imports are being restricted (Article 34), or when actual expenditures are higher than normed ones for goods of necessity to the economy (Article 33).

Article 42 says that prices of imports and exports are to be formed "under the influence" of foreign markets where they are supplied or sold (after trading markups, duties, taxes and other extras). Both categories of prices are further explained in the sections on foreign trade. According to Article 311, part 4, "receipts for exports are calculated by the leva equivalence of actual valuta or foreign trade prices." Nothing is said about the existence of different exchange rates for different exports; they may exist. In the case of agricultural products, foreign trade organizations may contract freely with agro-industrial complexes for prices on products delivered in excess or outside of state plan targets.

Import prices are covered more completely. Article 37, part 2, indicates that the same goods imported and domestically produced are to have applied a single price, except in cases specifically established by the Chief Administration for Prices of the Ministry of Finance. In Article 314, part 1, prices of imports are called "calculated prices" [kalkulativnite tseni] and are formed on the basis of the leva equivalent of actual valuta (foreign exchange) purchase prices and duties, commissions, transportation cost, etc. Part 2 of the same article explains that the relations with the state budget for "deciphering" of "price differences" [tsenovi razliki], taxes on turnover and duties on imports are to be arranged by the foreign trade organizations.

2. CATEGORIES OF PRICES

Article 44 sets out as many as seven categories of prices. They include: (a) fixed prices (without a specific period of application) for basic food and non-food consumer goods, basic communal services, fuels, energy and raw materials; (b) "temporary prices" [vremenni tseni] for new and improved products (domestic or imported), custom or style goods, experimental goods, etc.; (c) "limit prices" [predelni tseni] for prices differentiated by area and season as well as cases where maximum prices are set; (d) "minimum-maximum prices"; (e) "contract prices"; (f) prices with extras or discounts; and (g) "limit prices" and "limit expenditures."

3. PRICE-APPROVING AND PRICE-DETERMINING AGENCIES

There are three broad categories for price determination and approval.

First, by higher agencies (Article 37, part 3) called "state organs for prices and price formation" (which include the Council of Ministers, the Ministry of Finance, the Chief Administration for Prices of the Ministry of Finance, other ministries, and the executive committees of the peoples' councils of Sofia, districts and communes) and according to a list of approved by the Council of Ministers are established prices for basic foods and non-foods for domestic consumption, basic fuels, energy, raw materials, construction-installation work, internal transportation, new products of national significance, and several other categories.

Second, according to specific lists approved by the Council of Ministers, some prices may be determined by the "economic organizations," but must be submitted for approval to specified agencies in order to ensure price unity. In such cases, prices become effective in one month if the price agency has not objected.

Third, according to Article 38, all prices of goods, works and services not included above are determined by "free negotiation" [*svobodno dogovariane*] between the economic organizations. Such prices come into effect upon registration with corresponding state organs. Also, by negotiation (Article 39) are set prices within established limits or minimum-maximum prices and extras or discounts for some fixed prices.

4. PRICE CHANGES

Article 50 makes price changes part of the annual planning agenda with projects for planned "corrections" to be approved not later than April 30 of the year before they are to be applied. The same article mandates changes in internal prices of imports and exports whenever "significant" changes take place in their external or foreign-currency prices (prices are also changed for products having significant import content). Article 310 specifies a significant change as one causing more than a five percent divergence between planned, internal prices and international prices.

5. RECENT EVIDENCE OF PRICE CHANGES AND PROFITABILITY

The available evidence on Bulgarian prices suggests their continued relative stability, a characteristic suggesting they have not yet been actively used as regulators of the national economy.

State retail prices jumped an average of 14 percent in 1980 and probably moved again upward with the May, 1983, realignments of prices of food and some transport services. Details on prices of individual commodities in state retail trade and service prices usually also show stability for two- or three-year periods. Only prices of food in cooperative markets move up regularly and then sometimes fall.

Producer prices were also significantly raised on the average and readjusted in 1980. Another major movement upward of agricultural prices took place in 1981. Industry prices barely moved then, but came up again in 1982 when agricultural prices may have been relatively steady.[48]

Levels of profitability are regularly published only for industrial branches. In 1979 the average profit across branches was 20 percent over cost; it then fell to only 10 and 12 percent in 1980 and 1981, reflecting higher charges for imported energy and materials. Across industrial branches and among producing units there are wide deviations. In 1979, electrical engineering and electronics earned nearly 70 percent profits while coal mining lost over 45 percent (on costs). The range of deviations in 1981 fell as those two branches, again the extremes, registered a plus 31 percent and a minus 23 percent.[49]

In 1980 average agricultural prices showed 10 percent rates of profit. In this case profit rates had varied from 9 to 15 percent from 1975 to 1980. They were equal to those in industry only in 1975 at 14.7 percent. Crops averaged profits from 25 to nearly 30 percent while animal products made losses from 1976 to 1980. In 1980 a range of profitability went from grains at 43.5 percent to sheep products at 10.9. The price increases of 1981 were said to raise average profitability in agriculture to 18–20 percent.[50] At the same time, however, it was announced that the cost of such increases, 400 million leva, would be paid out of the state budget. This was against principles announced in 1979 when subsidies were to be eliminated in two years. And when producer prices were raised in 1980 so were state retail prices.[51] The rise of producer prices in 1981 was not followed by a retail price change until 1983. Then it was announced as a "realignment."

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[48] Indices of consumer prices are regularly published. But only available producer and foreign trade prices are implicit ones calculated from official sources.

[49] Statisticheski godishnik 1982, p. 217. Throughout the period since 1975, the coal industry is the only branch to register average losses consistently. In 1980 textiles also lost.

[50] Data for 1975 to 1980 are from Agrarno-promishlenite kompleksi v NRB prez 1975–1980 godina (osnovni pokazateli) (Sofia, 1981) p. 29; also see Novo vreme 1982: 9, p. 7.

[51] A useful discussion of the subsidies is found in RFER, Bulgarian SR/3, 20 February 1981, p. 9.

D. Plans and Counter Planning

Articles on plans and planning are found throughout the "Rules." They seem to continue former planning arrangements, although much is necessarily unclear at this point.[52] The new ideas on planning emphasize (1) the role of the "counter plans" [nasreschnite planove] of the economic organizations and (2) the notion of maintaining a fixed set of plan tasks for a five-year period, divided by years, for which economic organizations may accumulate excess or deficit fulfillment from one year to the next one. Perhaps because annual targets are now available through 1985, the practice of presenting targets for two years was dropped.

A general section on planning (Article 27) indicates that the objectives and tasks of the unified national development plan are to be brought to economic organizations not only by approval of control fugures and then state plan tasks, but also through the use of "economic levers"—prices, credit, interest rates, taxes, tariffs, duties, premiums and others. Economic organizations are to participate with ministries in deciding proposed control figures and state plan tasks. They also must elaborate counter plans. As nearly as can be understood, the counter plan not only incorporates the state plan tasks, but goes beyond in detail and scope (Article 153). Subsequently, the Council of Ministers can make changes in the annual state plans tasks given to economic organizations, but not more than two times annually and without "seizing the disclosed reserves" of the economic organizations (Article 30). The meaning of the latter remains unclear at this point.

The Council of Ministers approves control figures and plan tasks of the economic organizations for: (1) basic products in physical units; (2) total profits; (3) foreign currency receipts by currency area; (4) tasks for scientific progress and environmental protection; (5) important investment projects; (6) limits for basic materials, fuels and energy; (7) limits for machinery and equipment in short supply; and (8) limits for foreign currency by rubles and dollars.

In addition, the competent central agencies approve for the economic organizations: (1) taxes, duties, tariffs and other inflows to the state budget; (2) minimum obligatory deductions for money funds; (3) formation and limitation of the residual wages fund; and (4) domestic and planned foreign trade prices.

Among the planning functions assigned to the branch ministries (Article 8) are: (1) elaborating planned norms for inputs per unit of output of labor, materials, energy and capital for basic categories of products; (2) developing normatives for the effectiveness of capital investments and use of capacity; (3) establishing national materials balances for basic categories of products, according to a nomenclature set by the Council of Ministers; (4) establishing the quarterly divisions of annual state-plan tasks of economic organizations in coordination with the consuming branch ministries, ministries of trade and, for profits, the Ministry of Finance.

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[52] Even the idea of counterplanning was introduced in Bulgaria in 1971.

E. Summary Observations and Organization

It would be a surprise if Bulgaria could have significantly reorganized in a very short period of time. More surprising would be the ability to see clearly changes in economic performance due to reorganization. Surely this has been a lesson for studies of the more drastic reforms of Yugoslavia and Hungary. In Bulgaria's case evidence of a rather slower change was given on 22 February 1983 in a speech by Prime Minister Filipov to personnel of the central administration. He emphasized that the principles of the "economic approach" were good ones, but complained that some leading cadres in state administration still worked in the old ways, clearly preferring "administrative approaches" over the economic ones. Among their errors were unauthorized centralizing of funds, forcing enterprises to accept plan tasks when enterprises ought to have had choices, taking away reserves after enterprises proposed counterplans. On the other hand some organizations were getting away with monopoly profits and others were paying wage increases larger than their gains in productivity. Too few brigades were on economic accounting and contract ties among units were still too weak.

Some of his recommendations were not always consistent. A system of multiple taxes would have to replace a single profits tax in order to give the state more economic levers. The ministries needed to be given more funds in order to have more influence among economic organizations. Still, in major points he stressed that commodity-money relationships (markets) would have to be given greater force. And faster responses to changing foreign prices and markets would have to be found.[53]

Even later evidence has suggested delays and confusion in counterplanning before the end of the year.[54] Also, as pointed out above there is little evidence of significant price adjustments which would seem a necessary corollary to financial discipline. But that discipline probably hasn't yet been really strong. Subsidies and losses have surely continued. Through 1981, the last evidence, the state still financed significant investments from the budget.

One important evidence of the working of the new system is that plans and performance have been quite close (see Table 2). Also, plans have been relatively modest and reflect relatively even annual distribution of five-year targets. This may be a very important element in a transition. Taut plans probably would corrupt the new system. Possibly Bulgarian planners will learn or will be forced to be "coordinators" and leave efficiency up to the price system and the economic organizations.

VI. CONCLUSIONS

After having made a major balance of trade adjustment in 1976–80 in which growth rates of output, investment and consumption were reduced, Bulgaria seems to be undertaking another period of faster investment growth, especially in 1983 and 1984. There seem to be no changes in priorities for structure of production even though a marginal shift to agriculture might be indicated by foreign trade and balance of payment considerations. Also, reoccurring poor crops leave little margin for maintaining worker incentives.

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[53] Filipov admitted that the economy was still not sensitive enough to changes in the world economy and warned that significantly greater challenges were ahead for Bulgaria in this case. Possibly the new system, once stabilized, will breath new life in Bulgaria's interesting law providing for joint ventures in the country. For a discussion of that law and other interactions with the West, see RFER, Bulgarian SR/5, 18 April 1980; SR/6, 16 May 1980; and SR/9, 26 May 1982.

[54] See RFER, Bulgarian SR/12, 18 October 1983.

Bulgaria's strategy clearly is to push for greater production and exports of final industrial products, especially machinery and equipment. This is the preferred pattern of resource allocations and it is also clearly the hope behind the recent reorganization to emphasize "the economic approach and its mechanisms." What strikes one as most interesting in this domain is (1) the greater emphasis on actual changes in performance from year to year compared to plan fulfillment, (2) the effort to increase the flexibility of organizational operations as a way of promoting competition, and (3) possibly some greater flexibility in pricing of finished industrial products. At the same time the new system emerges slowly and it carries, intentionally, a great deal of planning and perhaps too much centralization. It is unclear how Bulgaria intends to improve its export performance in Western markets. That may be the ultimate constraint on its development.

PROSPECTS FOR BULGARIAN AGRICULTURE IN THE 1980'S

By Edward Cook*

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I. SUMMARY

Bulgaria is the second largest net exporter of agricultural commodities in Eastern Europe. However, during the latter half of the seventies domestic agricultural production, primarily crop production, slowed considerably from the long-term trend. This resulted in rising imports of key feed items such as corn and soybean meal. U.S. agricultural exports to Bulgaria grew dramatically, exceeding $200 million by 1981. Whether or not the growth trend in these exports is likely to continue through the 1980's is analyzed by assessing current Bulgarian agricultural policy and likely future agricultural investment and input levels.

The most significant Bulgarian initiative to revitalize its agricultural production growth rate has been a set of policy reforms referred to as the New Economic Mechanism (NEM). The NEM was introduced into the agricultural sector in 1979. In January 1982 it was moderately altered and extended to the rest of the economy. The focus of the NEM has been on increasing decision-making autonomy at the regional and local level, increasing the role of profit as an economic incentive, and introducing binding legal contracts as a determinant of economic responsibility. The number of different categories of centrally-determined plan directives was reduced from 24 to just four or five. Both regional and farm-level administrators were given greater control in the utilization of available resources.

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In a number of important areas, though, the drive for improved economic efficiency in agriculture has encountered serious obstacles. These include the tendency of old bureaucratic relations to reassert themselves despite being officially circumscribed and an unwillingness on the part of the State to fully allow economic performance to determine income levels. Though the NEM represents the potential for improvement in planning and organization, it is not expected to provide the hoped-for economic incentive or significant improvement in economic accountability among agricultural enterprises.

Total investment in agriculture is not expected to grow as strongly during the eighties as it did during the seventies. In terms of mechanization of crop production and land improvement, there are apparently fewer growth opportunities now than there were ten years ago. On the other hand, increased availability of fertilizer in 1981 and 1982 resulted in much higher grain production. Further modest increases in fertilizer use through 1990 should help insure higher crop production in the eighties compared with the seventies. One reason why a slowdown in investment growth rates for agriculture is not all bad news is that much of the investment made in the seventies, particularly in livestock housing, has remained underutilized because of specific bottlenecks in the system. One important bottleneck has been the failure to provide adequate feed supplies. As these bottlenecks are loosened, agricultural production growth should continue in the eighties. Two other areas that can contribute to production growth are the development of new seed varieties and improved animal breeds. Bulgarian work in developing improved wheat varieties has been particularly successful with yields now close to the highest world standards.

Overall, agricultural production is expected to grow about 2 percent annually during the eighties, compared with the 1981-85 plan target of 3.4 percent annual growth. By maintaining a balance in growth between crop and livestock production, Bulgaria is expected to be a small net exporter of grain through 1990, with exports of roughly 500,000 tons of wheat being partially counterbalanced by continued imports of corn. Except in years following severe drought, Bulgaria is not expected to import as much grain as it did in 1980 and 1981, when U.S. exports soared. Imports of soybean meal, on the other hand, are expected to increase during the eighties, because of a continued and growing shortage of protein in livestock feed rations.

Bulgaria is expected to expand its positive balance of trade in agricultural commodities during the eighties. Only modest increases in agricultural imports are anticipated. This is consistent with Bulgaria's goal of maximizing self-sufficiency in those agricultural items it can produce domestically. Such a policy is reflected in the fact that only 7 agricultural commodities account for roughly two-thirds of all Bulgarian agricultural imports. This is even more striking in trade relations with the United States, where two commodities—corn and soybean meal—account for 90 percent of Bulgarian agricultural imports.

The prospects for U.S. agricultural exports to Bulgaria through 1990 are for levels below the $200 million record of 1981. Only in years following severe drought will this level likely be approached or slightly exceeded. There are two reasons for this. First, based on crop and livestock projections contained in this report, Bulgarian corn imports in general are not expected to be as high for the rest of the eighties as they were in 1980 and 1981. Second, despite prospects for higher Bulgarian soybean meal imports, the United States will face increased competition from Brazil, the world's second major supplier. Between 1979 and 1982 Bulgaria banned imports of Brazilian soybean meal because of the fear of possible swine-flu problems. In 1983 this ban was apparently lifted. Any growth in U.S. agricultural exports to Bulgaria will likely depend, therefore, on commodities other than corn and soybean meal. Given the Bulgarian policy of self-sufficiency in agricultural products, significant exports of other commodities will probably be difficult to develop.

II. AGRICULTURAL POLICY REFORM

During 1976–80 agricultural production grew just 11 percent in comparison with 1971–75, well below the original plan target of 25 percent. This disappointing growth in production was accompanied by a much faster rise in agricultural expenditures, which increasingly threatened farm-sector profitability.[1] For example, between 1975 and 1980 wage fund expenditures increased by over 30 percent and the value of fixed assets in agriculture in constant prices, increased over 40 percent.

The Bulgarian Government has attempted to deal with the problem of slow production growth and sky-rocketing costs through a major policy initiative in agriculture. In 1979 the Ministry of Agriculture was replaced by the National Agro-Industrial Union (NAIU) whose purpose has been to integrate and control the entire food sector, from production through processing to marketing. In conjunction with this reorganization, a set of policy reforms known as the New Economic Mechanism (NEM) was introduced into agriculture.[2] The aim of the NEM is to boost labor productivity and overall efficiency in agriculture by emphasizing cost-accounting methods and financial self-sufficiency at the farm level. By tying income more closely to work performance and greatly reducing the number of centrally planned targets, farm organizations are expected to find it both attractive and feasible to improve production processes. Under the NEM, business relations among economic units in agriculture and the food economy (for instance between farms or between a farm and an agricultural service organization) are to be carried out in "strict" accordance with legal contracts.

Planners hope that this will significantly reduce the amount of bureaucratic haggling and the failure to meet delivery targets, which have been long-standing problems in Bulgarian agriculture.

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[1] Sivenov, Blagovest, "Faktori na proizvodstvo, intensifikatsiyata i noviyat kompleksen podkhod kum problemite na selskoto stopanstvo", Planovo stopanstvo, No. 3, 1983, p. 30.

[2] The NEM was subsequently extended to the entire economy as of Jan. 1, 1982.

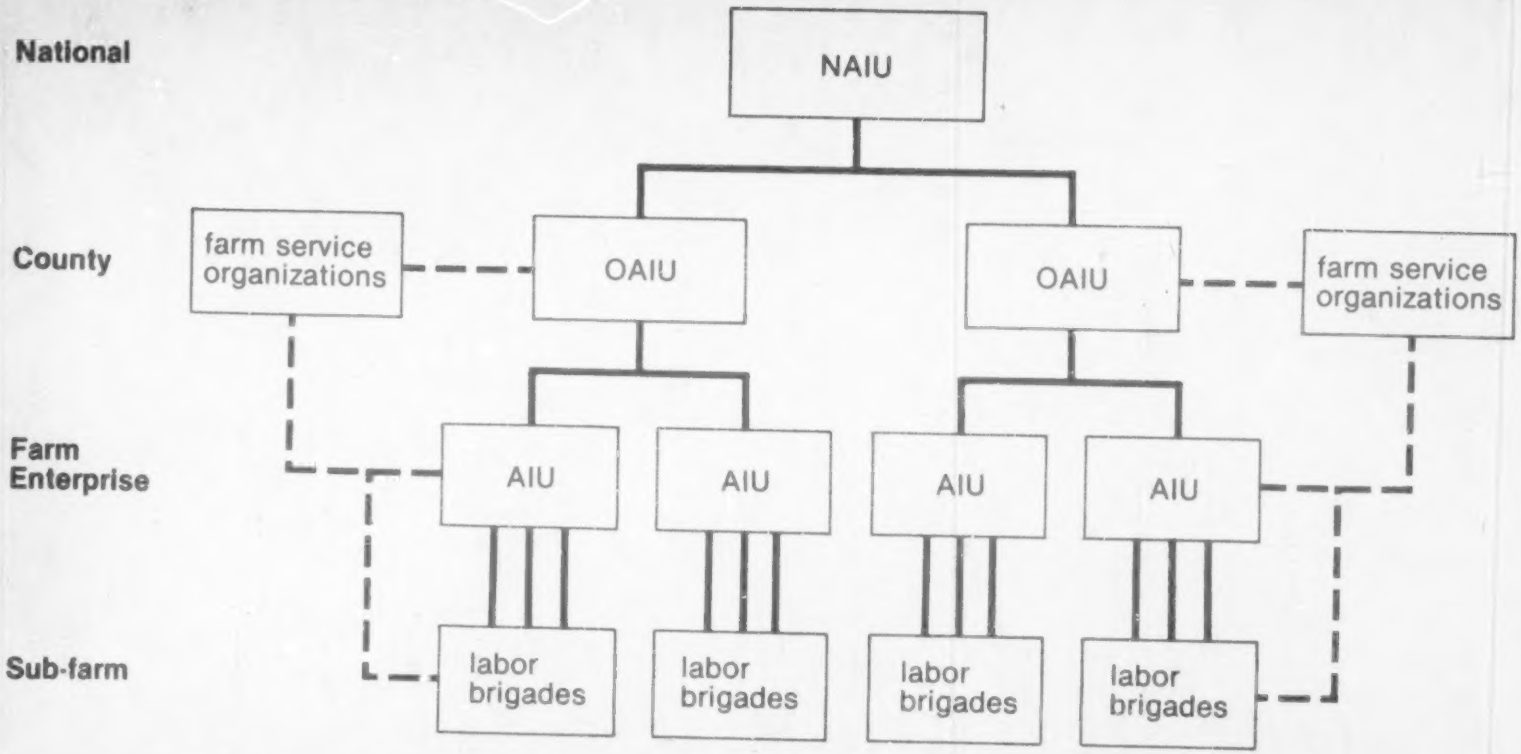
Because emphasis is now being placed on improved productivity and efficiency, successful implementation of the NEM will play a crucial role in revitalizing agricultural growth rates for the rest of the eighties.

A. Organizational Reforms

The basic organizational structure of agriculture under the NEM is illustrated in graph 1. At the national level, the NAIU retains most of the functions of the old Ministry of Agriculture and also works to integrate the activity of food processing and agricultural service organizations. The NAIU remains responsible for developing the Five Year Plan guidelines, which provide the framework for annual plan formulation. The NAIU also develops macro-level production targets on an annual basis. The annual targets are finalized after feedback on preliminary targets is received from the farm and county level.

Figure 1

Basic Organization of Bulgarian Agriculture


National
NAIU
County
farm service organizations
OAIU
OAIU
farm service organizations
Farm Enterprise
AIU
AIU
AIU
AIU
Sub-farm
labor brigades
labor brigades
labor brigades
labor brigades

Under the NEM the number of categories of centrally-determined plan obligations has been reduced from 24 to just 4 and now include the following: 1) delivery targets to the State for key crops, 2) a target for foreign exchange earnings from exports paired with limits on imports, 3) a target for contributions to the State budget, 4) limits on material input utilization. The NAIU utilizes its budgetary fund in part to insure that investment projects considered sufficiently important at the national level are implemented. In addition the NAIU budget is used to redistribute income from more successful to less successful farms. Recently there has been indication that a fifth centrally-determined plan directive, one setting a target for the introduction of improved scientific-technological production processes, has been introduced.[3]

In each of Bulgaria's 27 okrugs (counties) plus the capital district of Sofia, Okrug Agro-Industrial Unions (OAIU's) have been established. Though originally their role was to coordinate agricultural activity, largely by channeling information between the farm and national levels, they have recently been given greater power in implementing the plan targets in their regions. The OAIU's now have partial managing control over their various constitutent non-farm organizations such as agricultural service organizations, seed and animal breeding centers, as well as some food processing facilities and scientific institutes in their jurisdiction. All of these non-farm organizations, though, also remain subordinate to their respective national-level hierarchies.

The shift in role from coordinator to plan executor means that the OAIU's will be intervening more actively in the affairs of farms in their jurisdiction. In particular, the OAIU will have greater say in the use of land, machinery and other factors of production at the farm level, as well as chief responsibility for insuring that foreign exchange earnings from agricultural exports are met.[4]

The primary farm enterprise under the NEM is the local Agro-Industrial Complex (AIC). As early as 1971, Bulgaria began consolidating its state and collective farms into "agro-industrial complexes" and by the late 1970's this process was virtually complete. Currently there are roughly 10 AIC's per okrug with an average of 17,500 hectares (43,000 acres) each. A typical AIC consists of four of the pre-existing state and collective farms. An important rationale for developing the AIC system was to improve horizontal integration. Furthermore, when the NEM was originally introduced, the AIC was seen as the crucial link in a system of decentralized decisionmaking. Greater flexibility for the individual AIC in dealing with its specific operating conditions and problems was a major underpinning of the system. The individual AIC's were given greater freedom in budgeting their own revenue among wages, investment, reserves and other uses. The extent of other directives was also reduced. In the past, farms received detailed instructions not only on how much of a particular crop to produce, but on how much land it should be sown. With the implementation of the NEM, these guidelines were replaced by a simple target for deliveries to state purchasing points of specific commodities, with no single AIC having to meet targets for more than 8 items. As an economic incentive, the law on profit taxes was changed. Earlier profits were subject to a progressive tax. Under the economic reform, the AIC's face a fixed contribution to the State budget and can retain profits in excess of this amount.

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[3] Risna, Maria and Yanakieva, Ivanka, "Kharakterni cherti i novi momenti v usuvurshenstvuvaneto na planiraneto v usloviata na noviya ikonomicheski mekhanizum," Ikonomika na selskoto stopanstvo, No. 7, 1982.

[4] Ganev, A., "Sovershenstvovaniye ekonomicheskogo mekhanizma v. sel'skom khoziaistvie NRB," Ekonomika sel'skogo khoziaistva, No. 12, 1982, p. 84.

With the recent boost in the authority of the regional OAIU's, the agro-industrial complexes are receiving more norms and interference from above than originally intended under the NEM. Some reasons for the shift in priority from the farm to country level will be discussed below.

Each AIC consists of a number of labor brigades, which represent the primary production unit in agriculture and are usually assigned a particular land area or production line within the AIC. Under the NEM, a primary purpose of the labor brigades is to improve the link between work performance and remuneration, thereby raising labor productivity. Originally emphasis was placed on brigade units of a relatively small scale, composed of no more than a few dozen workers. As a result of problems with coordination and control, however, the typical brigade is now quite a bit larger, with some responsible for thousands of hectares. Such a large scale would seem to greatly weaken the correlation between the individual's work performance and his remuneration. If the worker comes to see that his extra effort is not rewarded, a major source of improved productivity will be lost. Because the income of the individual will be dependent on the performance of a fairly large brigade, high-quality management at the brigade and AIC levels will be essential if the link between improved worker performance and higher income is to be attained.

The brigades are expected to be economically self-sufficient, with their wage fund tied directly to their net income. The brigade is free to organize its own activity by distributing specific responsibilities among its members.[5] The brigade is constrained, however, by norms and guidelines handed down from the AIC administrative council. These include transfers to the AIC budget, control over the brigade's allocation of revenue among its various funds (wage fund, investment fund, etc.), the quantity of farm output by commodity and its production schedule, labor and input expenditures per unit of production, and total input supplies for the brigade. In addition, targets for both gross and net income for the brigade are established by the AIC.[6]

At the basic production level, therefore, Bulgarian agriculture continues to be dominated by norms, directives and technical standards. According to Article 12, paragraph 2 of the Model Statute for the AIC:

> The AIC shall distribute the state planned targets, norms and ceilings based on control figures among its sub-units [brigades] in accordance with their natural and economic conditions, and standards and norms based on engineering plans for the

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[5] Petkov, Petko, "Metodicheski principi na organizatsiya na truda," Zhivotnovudstvo, No. 10, 1980.

[6] Ganev, A. op. cit.

utilization of land, and equipment, outlays of manpower, raw materials, and other material resources.[7]

In exercising control over its brigades, the AIC not only invokes national "standards and norms," but is also free to adjust these technical measures to reflect the "natural and economic conditions" of each specific brigade. The determination of these "natural and economic conditions" appears to invite arbitrariness and bureaucratic entanglement into the AIC-brigade relationship.

B. The Role of Profitability and Wage Fund Determination

Farm profitability, as determined by officially established prices, is seen as a crucial pre-condition for the NEM, because it means that farms can successfully manage their own affairs with a minimum of bureaucratic interference from the national or okrug level. To help insure farm profitability, major procurement price increases have been enacted under the NEM. However, the Bulgarian Government is by no means giving full rein to profitability as a determinant of farm success or failure. Preferential programs exist for farms in hilly and mountainous regions as well as for weaker AIC's throughout the country, which in effect allow them to continue producing at a loss.

If the State is unwilling to tolerate major income differentials among farms or to allow farms with chronically poor performance to fail, the financial discipline the NEM aims for will be difficult to implement. Many AIC's have allowed major overruns in expenditure, particularly in the wage fund, knowing that by one means or another, the State budget would bail them out.[8] In fact there are clearly enough economic levers at the national or okrug level to greatly reduce income differentials by farm and provide such a bail-out. These levers include among others, the norms for input use and differential contributions to the NAIU and OAIU budgets. If each AIC is separately assessed plan targets based on what it can economically bear, the hoped for production incentive of the new law on profits will certainly be weakened in the sense that would-be profits from improved performance will be siphoned off by tougher plan requirements. The greater authority of the Okrug Agro-Industrial Unions to interfere in the affairs of the AIC may further tend to weaken the sense of responsibility for financial performance at the farm level.

Similar problems exist at the brigade level in properly associating income with work performance. Despite the appeal to "objective norms and standards," the control the AIC exerts over its constituent brigades is necessarily subjective in nature. There is likely to be pressure within the AIC to adjust targets and limits to the various brigades so as to smooth out income differences. This income-leveling acts to break the tie between work performance and remuneration. According to one report such problems were evident after the implementation of the NEM.[9] Recently, steps have been taken to protect individual brigades from AIC interference.

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[7] Durzhaven vestnik, Mar. 28, 1980.

[8] Markov, Marko, "Discipline and Responsibility—Everywhere and from Everybody," Kooperativno selo, Nov. 5, 1980; translated in JPRS East Europe Report, Economic and Industrial Affairs.

[9] Nikalov, Georgi, "Samostoyatelnost, no i zadulzheniya," Kooperativno selo, June 13, 1980.

For example, originally profit as such did not accrue to the brigade, but rather served as an adjustment indicator for the wage fund.[10] However, the decision on how to adjust the wage fund remained under control of the AIC administrative council. Now the brigades are allowed to retain 40 percent of their profits and the AIC's may not alter this amount.[11] However, the AIC's maintain enough control to directly influence the level of brigade profitability.

How to develop an objective basis for determining normative wage fund limits is a related problem. According to one recent study, final economic results cannot be the sole determinant of the appropriate wage fund level, because different brigades and AIC's face different "natural and economic conditions." Ideally, the wage fund should be formulated to reflect the quantity and quality of labor invested in the production process.[12] Attempting to differentiate the influence of the "quantity and quality of labor invested" from the influence of natural conditions or of pricing and other policies made at the national or okrug level would appear to be an extremely difficult proposition. Furthermore, the willingness to at least partially ignore economic results in formulating a wage fund system allows for continued inefficiencies in resource allocation. At both the AIC and brigade level the economic incentive of linking income with performance could be dampened by an a priori determination of what is an acceptable range of divergence in income distribution.

C. Contractual Relations

The role of contracts under the NEM is to allow agricultural enterprise greater autonomy in securing supplies of inputs and purchasers of farm output.[13] In addition, contracts can serve as a basis for determining responsibility in economic relations, thereby making organizations accountable for poor performance.

Thus far, several problems have been cited in successfully implementing the contract system. A major source of difficulty has been in relations between farm organizations and monopoly suppliers of inputs and services.

> The AIC . . . continue to be in an unequal situation with regard to contracts with other organizations. Conditions and provisions are dictated to them that have nothing to do with the requirements of the NEM. This affects first of all supplies and those organizations which carry out regulated services . . . the new contract system does not remove the monopolistic rights of some state economic organizations that have business dealings with the agro-industrial complexes.[14]

Though the prices of inputs and services are set by the State, servicing organizations take advantage of the AIC's in terms of quality of delivery date of inputs and services. Recently there have been promises of changes in these prevailing practices, but there is little reason to expect any significant improvement. One step that has been taken is to link half of the wage fund of the agricultural service organizations to the economic results of the service purchasers. Farms now pay 90 percent of service costs at the time of performance with the balance payable at the end of the year, depending on the production success of the farm.[15]

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[10] "Ikonomicheski mekhanizun za upravleniye na narodnoto stopanstvo prez VIII petiletka," Rabotnichesko delo, Jan. 15, 1982.

[11] Ganev. A. op. cit.

[12] Draganovna, Ilka, "Metodologicheski i metodicheski vuprosi na analiza i otsenkata na organizatsiyata na rabotnata zaplata v selskoto stopanstvo," Ikonomika na selskoto stopanstvo, No. 7, 1982.

[13] As part of the NEM, the agro-industrial complexes are assigned state delivery targets for up to 8 commodities, but have marketing control over other commodities as well as above-plan supplies of targeted commodities.

[14] Nikolov, Georgi, op. cit.

In the Bulgarian economy, failure to satisfy contract conditions can often be attributed to factors beyond the control of the supplying organization, such as when the supplying organization is unable to obtain materials needed for contract fulfillment because third parties are not living up to their obligations. This ability to pass the buck has made the determination of the extent of guilt for contract unfulfillment very difficult.[16] The problem is not likely to be solved in the near future.

D. Regional Food Self-Sufficiency and Private Plot Agriculture

The program of regional self-sufficiency in major food items, initiated in 1977, will play an important role in improving food market supplies during the eighties. This program focuses on such key food items as meat, eggs, vegetables and fruit. In 1980, private plot agriculture accounted for 39 percent of meat, 55 percent of egg, 32 percent of vegetable and 39 percent of fruit production.[17] However, private agriculture's share of production for local consumption is even higher. Therefore, private plot farming has been and will be a crucial part of the regional self-sufficiency program. Market supplies of the above items are to improve by formulating regional supply targets from local production and by reducing access to national food reserves. Such reserves "will be available only for the capital, large tourist centers and certain major industrial and non-productive regions." [18] Primary responsibility for implementation of the self-sufficiency program was originally placed with the AIC's. However, many shortcomings persisted. Most AIC's continued to consider the needs of the private plots for such essentials as chemicals, veterinary care and machinery services as lowest priority.[19] In addition, private plot holders who had contracted with the AIC for livestock product deliveries often did not receive stipulated supplies of feed grain. Private plot holders were not given satisfactory access to breeding animals owned by the AIC.[20] Finally, supplies of small tools in great demand on private plots remained unsatisfactory.

Besides problems in relations with private farming, the AIC's found the establishment of self-sufficiency goals a constraint on their management autonomy; by setting the self-supply targets arbitrarily high, planners could in effect leave the AIC with little freedom in determining crop sowing patterns. This in turn was seen as contradictory to the intent of the NEM.

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[15] Ganev, A., op. cit.

[16] Risina, Maria and Yanakieva, Ivanka, op. cit.

[17] Statisticheski godishnik na NRB, 1981.

[18] Lilov, Grigor "Za zavurshvane izgrazhdaneto na sistemata za samozadovlyavane na naseleniyeto s osnovni selskostopanski produkt," Planovo stopanstvo, No. 4, 1980.

[19] Shamliev, Barukh, "Merits and . . . Undeserved Underestimation," Pogled, November 9, 1981; translated in JPRS East Europe Report, Economic and Industrial Affairs.

[20] Lilov, Grigor, "Private Farm Plots during the Eighth Five Year Plan," Otechestven Front, Dec. 3, 1981; translated in JPRS East Europe Report, Economic and Industrial Affairs.

Recently, adjustments have been made to overcome some of these problems. Primary responsibility for self-sufficiency program has been shifted up the hierarchy to the OAIU and with it more emphasis is now placed on regional rather than village self-supply. The status of private farming has also improved. The Government has offered procurement price premiums for private-plot holders who raise livestock relying on their own feed supplies, rather than those stipulated in contract arrangements with the AIC. It has been recommended by the Council of Ministers that the AIC's make it possible for workers in good standing to raise, in their spare time, an unlimited number of animals for their own needs and for sale to purchasing organizations.[21]

The food self-sufficiency program continues to suffer from antagonisms over production targets and deliveries between the central planners and the regional authorities. Furthermore, financial incentive is lacking at the AIC level to meet the targets. On the other hand, the traditional antagonisms between private and socialized agriculture are likely to weaken gradually over the next few years, largely because the AIC can now include in their plan fulfillment calculations the value of final production from private plots. Such a process will contribute to improving market supplies of many food items, but will likely require fuller support from industry in meeting the material input needs of the private plot farmer.

E. Policy Assessment

Since 1982 the original concept of the New Economic Mechanism of the increased decision-making autonomy at the local level based on centrally determined parameters has given way to a recentralization of decision-making authority at the okrug level. In place of emphasis on the use of economic levers, attention is now placed on the adjustment of organizational structures so as to insure the implementation of improved agricultural technology and know-how. The shift in emphasis from an economic to a technical reform has brought with it increased norms and standards, particularly at the AIC and brigade levels.

Though the NEM was never a truly major economic reform—wholesale and input prices are set for long periods and are inflexible and the potential incentive influences of profit are strongly circumscribed by the State—it does represent an improvement in the organizational structure of agriculture and the successful abandonment of outdated norms and controls from the center. Significant areas for "bureaucratic negotiation" among different levels in the organizational hierarchy remain, however, with little hope for satisfactory functioning of the contract system.

The brigade system of labor has improved farm-level organization by more clearly defining the allocation of labor and material resources. This in turn has increased the degree of accountability of economic activity on the AIC. However, the major goal of the brigade system of more closely linking work performance with remuneration has likely been compromised in many cases by the large scale of brigades and increasing interference in brigade activity from above. A main reason for this interference has been the desire of AIC management to avoid growing income differentials among brigades.

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[21] "Uvelichavane proizvodstvoto na zhivotinska produktsiya i regulivane prodazhbata na zurno v lichnoto stopanstvo," Kooperativno selo, Dec. 18, 1981.

This same situation holds true for higher levels of the organizational structure. Unless the State proves willing to make organizations bear the full burden for poor economic performance and reward them sufficiently for good performance, the sense of economic responsibility which the NEM originally aimed for will not be attained. The subjective determination by the State of "fair operating conditions" for agricultural organizations appears to provide less efficient ones with a ready-made excuse for poor performance.

F. Possible Implications for the Soviet Food Program

In a number of ways, the Bulgarian NEM parallels policies contained in the Soviet Food Program. These include the concept of integrating agriculture more closely with support and processing industries in large part through the creation of regional level agro-industrial organizations, reliance on the brigade or team organization of labor, reduced reliance on centrally-planned directives, an increased role for contracts in agriculture, emphasis on farm sector profitability provided for by ample procurement price increases and a better integration of private plot agriculture into the planning process. Because of the scale of the country, the Soviet Union faces a much more complex task in reforming its agricultural sector than any East European country. This is true not simply because of logistics, but also because of the principle of minimizing differences in regional development, despite widely differing natural endowments.

In the areas they share in common, the Soviet Food Program appears to be lagging behind the Bulgarian NEM by a number of years. For instance, less has been done to integrate the national hierarchies of the constituents of the agro-industrial complex, and the central authorities seem to have retained a greater extent of decision-making prerogatives than in Bulgaria. Also the brigade or team system of labor has not been instituted to the same extent as it has in Bulgaria, nor has the responsibilities of the regional-level agro-industrial organizations (the Soviet RAPO's) been as clearly defined in practice.

What the Bulgarian experience would seem to indicate is that the Soviet Food Program reforms will remain primarily organizational in nature, emphasizing the more rapid and effective implementation of improved technology and production methods. Based on Bulgarian experience, there is little likelihood that the Food Program reforms as they now stand are leading to a Hungarian-style reliance on economic incentives. In fact, the Food Program emphasizes large aid packages for unprofitable or barely profitable farms, which would seem to provide something of a counter-incentive to improving economic performance. The brigade or team system of labor should provide some improvement in production performance, but the obvious ability of higher-up organizations to manipulate brigade activity and final results will probably keep this reform from meeting its full economic potential.

III. INVESTMENT AND INPUTS

Investment in agriculture in the 1970's grew at a rapid rate (table 1). This in turn, facilitated an even more rapid growth in the value of fixed assets in agriculture. The problem facing Bulgarian planners in the 1980's is how to realize a larger return from the commitment of resources to this sector. During 1976–80, nearly half of agricultural investment was devoted to reconstruction or modernization of existing facilities.[22] This strategy is likely to be pursued further during the current decade.

No plan indicators for total agricultural investment in the 1980's have been published, though it's likely that past growth trends will not be maintained. The Five Year Plan for 1981–85 provides for only a 20 percent increase over the previous five year period in economy-wide investment, compared with a 42 percent increase in 1976–80 over 1971–75. Unless agriculture's share of total investment increases, past growth rates of agricultural investment cannot be maintained. In fact, in 1982 investment in agriculture was 11 percent below the 1980 level. However, such a slump in agricultural investment could be viewed as consistent with the planners' goal of concentrating attention on better coordinating the use of already existing fixed assets.

TABLE 1.—INVESTMENT AND VALUE OF FIXED ASSETS IN AGRICULTURE IN CONSTANT PRICES, 1970, 1975, 1980–82

[In millions of leva]

	1970	1975	1980	1981	1982
Investment	528.5	780.8	893.9	974.9	793.4
Fixed assets	4,352.5	5,983.4	8,501.2	9,059.3	NA

NA=Not available.
$1=0.86 leva.

Source: Statisticheski godishnik, various editions.

A. Agricultural Chemicals

Expansion in the use of fertilizers and plant protection chemicals (PPC's) since 1970 has been dramatic (table 2). Bulgaria now exceeds the average fertilizer intensity for Eastern Europe and ranks first in the region in the per hectare use of PPC's. It has been claimed that the use of chemicals has had the largest direct impact on crop yield increases.[23]

Given its dry climate, further growth in fertilizer intensity on non-irrigated land may have only a limited impact on yields. Increasing attention is likely to be devoted to improving the quality and distribution of fertilizers, including increasing the share of concentrated and granular fertilizers.

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[22] Petrov, Evgeni, "Tendentsii v razvitieto na selskoto stopanstvo v Bulgaria," Ikonomika na selskoto stopnastvo, No. 5, 1982.

[23] Ibid.

TABLE 2.—FERTILIZER AND PLANT PROTECTION CHEMICAL USE IN BULGARIA, 1970, 1975, 1980, AND 1981

[Kg./ha. of arable land]

	1970	1975	1980	1981
Fertilizers	143	157	199	251
Of which:				
Nitrogen	85	88	108	124
Phosphate	53	58	70	98
Potassium	6	11	21	28
Plant protection chemicals	2.7	5.6	9.6	11.7
Of which:				
Herbicides	.8	1.4	1.5	1.9

Source: Statisticheski godishnik, 1982, p. 297.

Despite its high energy-intensiveness, production of nitrogen fertilizer has continued to increase in recent years. Significantly larger imports from the Soviet Union of natural gas have facilitated the growth. If planners decide on higher nitrogen fertilizer production for the rest of the 1980's, they should face little raw material constraint.

Bulgaria is also dependent on imported raw materials for the production of phosphate fertilizers. Deliveries from the Soviet Union have been short of requirements, necessitating significant imports from hard currency sources. The need to reduce hard-currency expenditures led to a decline in Bulgarian phosphate fertilizer supplies between 1978 and 1980. However, in 1981 and 1982 the Soviet Union did increase phosphate ore shipments to Bulgaria resulting in larger phosphate fertilizer supplies.

Requirements remain least satisfied for potassium fertilizers, which have been imported solely from the U.S.S.R. Though imports between 1978 and 1980 doubled to 150,000 tons, more than twice as much will be required to attain an appropriate nutrient mix with current levels of nitrogen application.[24]

Though statistics indicate high levels of plant protection chemical use, herbicide availability remains short of requirements, with one result being excessive weeds on irrigated land. Bulgaria continues to rely heavily on imports of PPC's, most of which come from the CEMA nations, but certain key items continue to be imported from the West.

B. Land Improvement

Bulgaria has a larger share of its arable land under irrigation—roughly one-quarter—than any other East European country. The most rapid expansion of irrigation occurred in the 1950's and 1960's. For the 1980's, little expansion of irrigable area is anticipated. The 1981-85 Five Year Plan calls for an increase of just 7 percent, from 1.19 million hectares to 1.27 million hectares. Efforts will be devoted primarily to improving the efficiency of systems already in use.[25]

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[24] Ibid.

TABLE 3.—IRRIGABLE LAND IN BULGARIA, 1970, 1975, 1980, AND 1985

[1,000 hectares]

1970	1975	1980	1985 plan[1]
1,001	1,128	1,182	1,267

[1] Based on planned increase of 85,000 hectares from the 1980 level.

Source: Statisticheski godishnik, 1982, p. 304.

In many areas, the productivity of Bulgaria's irrigation systems has been disappointing. For example, during the 1970's the average yield of corn grown on irrigable land exceeded that of dry-land corn by barely 20 percent. The major reasons for the problems have been the low technological level of existing systems (60 percent are gravitational), a shortage of water (in a typical year only 80 percent of irrigable areas receive any water at all and the share of irrigable land receiving satisfactory amounts of water is much lower), and a shortage of skilled personnel to run the systems. As one Bulgarian report pointed out:

> From 150,000 to 200,000 hectares of corn are annually planted on irrigable land. But in fact scarcely 15 percent of this area is fully supplied with water. The low social productivity in these activities at times prevents the irrigation from being timely.[26]

The concentration of authority within the Okrug Agro-Industrial Unions may allow for better coordination of irrigation work at the local level in coming years. Furthermore, modernization of inoperable or outdated systems should have a positive impact on yields.

Drainage is a much less pressing need in Bulgaria than is irrigation. During 1981–85, the availability of drained land is planned to increase 40,000 hectares, largely as a means of bringing new land into crop production. Though no target is included in the plan, more priority is expected to be given to erosion control programs in the 1980's. According to one Bulgarian report, wind erosion could become a major problem by the end of the decade.[27]

C. Mechanization

Mechanization is nearly complete for cultivation and harvesting of grain, sunflowerseed, forage and certain other crops. It remains incomplete for harvesting of fruit and vegetables and for cultivation and harvesting of crops such as sugarbeets and tobacco. This relatively high level of mechanization is reflected in the fact that tractor numbers—in terms of standard horsepower units—have been fairly stable since 1979, following a gradually diminishing growth trend (table 4).

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[25] "Tezisi na dvanadesetia kongres na Bulgarskata Komunisticheska Partiya," Rabotnichesko delo, Feb. 16, 1981.

[26] "Tsarevitsa—s optimalna positsii v struktura na posevnite ploshti," Zemedelsko zname, Jan. 24, 1981.

[27] "Lesno se pile, trudno se subire," Kooperativno selo, Sept. 19, 1980.

TABLE 4.—TRACTOR NUMBERS IN BULGARIA, 1970, 1975, 1978, 1980, AND 1981

[In thousands of units]

	1970	1975	1978	1980	1981
Physical units	53.6	64.7	64.4	62.0	60.5
Standard 15 horsepower units	93.7	136.6	152.0	153.3	152.4

Source: Statisticheski godishnik, 1982, p. 294.

Emphasis under the current Five Year Plan is being placed on larger scale machinery, particularly of tractors, and to a lesser extent on increasing machinery for farming in hilly and mountainous areas.

Mechanization of livestock raising is less advanced than that of crop production, with cattle and sheep raising lagging furthest behind. These are also the two areas where labor shortages are reportedly most severe.[28] The low technological level of cattle raising has been cited as a major barrier to increased production. To combat this problem, the 1981–85 Five Year Plan stressed the need to develop modern pasture complexes for both sheep and cattle. However, continued major cost overruns in construction and operation of such modern livestock facilities could retard these expansion plans.

D. Labor

The size of the agricultural labor force in Bulgaria declined rapidly between 1960 and 1975, but with the approach of full mechanization, has declined only slightly in recent years (table 5). There are roughly twice as many workers per 100 hectares in Bulgarian agriculture than in the countries of the European Community (EC). Though the Bulgarian labor figures include some workers not directly involved in agriculture—including some in construction, food processing, etc.—Bulgarian agriculture remains labor intensive by the standards of developed Western countries. Despite the abundant labor supply, shortages of labor are reported at peak workload periods, and year-round for certain branches such as sheep and cattle raising. Some of the problem may stem from the age structure of labor. Fourteen percent of Bulgaria's agricultural labor force is beyond retirement age compared with just 3 percent in industry. Only 5 percent is under 25 years of age compared with 19 percent in industry.[29]

TABLE 5.—AGRICULTURAL LABOR IN BULGARIA, 1960, 1970, 1975, 1978, 1980, 1981

	1960	1970	1975	1978	1980	1981
Total (in thousands)	2,166	1,460	1,188	1,052	1,038	1,025
Per 100 ha. of agricultural land	38	24	20	17	17	17

Source: "Prospects for Agricultural Production and Trade in Eastern Europe." Vol. 2, OECD, Paris, 1982 and Statisticheski godishnik, 1982, pp. 168, 267.

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[28] Petrov, op. cit.
[29] Ibid.

A major task for the eighties is to speed up the growth in labor productivity, which increased only slowly during the second half of the seventies. Between 1975 and 1980 value added per worker increased only 13 percent, much less than the increase in wage payments.[30] A continuation of the recent gradual downtrend in agricultural labor is anticipated for the rest of the decade.

E. Agricultural Transportation

Transportation for agriculture is another area requiring substantial investment during the eighties. The cost of transportation per ton-kilometer is only half as much for trucks as it is for tractors. However, truck transportation in Bulgarian agriculture remains insufficient both in terms of truck availability and quality of service.[31] In 1979, 41 percent of trucks in agriculture were fully depreciated while another 26 percent were within 3 years of this limit.[32] In addition problems have arisen regarding the contracting of services between the AIC and regional transport kombinats, which under the current economic organization are expected to satisfy the bulk of the transport needs of the individual AICs. If losses associated with untimely and insufficient transportation in agriculture are to be reduced during the eighties substantial funds will need to be invested to modernize the truck fleet, improve truck servicing facilities and spare parts supplies and possibly return control of agricultural transportation to the individual AIC.[33]

IV. CROP PRODUCTION ASSESSMENT

Balanced growth in crop and livestock production is a priority of Bulgarian agricultural policy for the eighties. During 1976–80, crop production increased a mere 4 percent compared with the previous five years. This combined with much more rapid growth of livestock production resulted in growing feed imports. For 1981–85, crop production is slated to increase 19 percent [34] with particular emphasis placed on grain and feed production.[35] Other crops receiving official priority are sugar beets, sunflowers, grapes and tobacco.

The 1981–85 plan calls for an increase of 200,000 hectares of total arable land area by reintroducing to production abandoned land in mountainous and hilly regions. Most of this area increase is expected to be channeled into grains. For other priority crops, area increases are likely to be slight at best during the eighties.

Higher crop production by 1990 is expected because of expanded and qualitatively improved supplies of machinery and fertilizer, the introduction and expansion of improved seed varieties, implementation of improved cultivation practices, and higher labor efficiency as a result of the NEM.

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[30] Ibid.

[31] Ninov, Goran, "Organizatsiya na avtotransporta v selskoto stopanstvo," Ikonomika na selskoto stopanstvo, No. 5, 1979.

[32] Ibid.

[33] Ibid.

[34] This figure is derived from the announced target for total agricultural production of 18 percent and that of livestock production of 17 percent.

[35] Rabotnichesko delo, Feb. 16, 1981, op. cit.

Among the grains wheat will likely maintain top priority. Seed development programs for wheat have been particularly successful and Bulgarian yields are now quite high by world standards. Furthermore, labor expenditures per ton of wheat produced are only half that of corn.[36] For corn yields to improve, better functioning of the irrigation systems will be essential. Other factors recently cited for disappointing corn yields include poor quality of seeds, lack of necessary herbicides, and high losses during harvesting.

Because of the emphasis on wheat and corn, barley area is not likely to regain its record level of 530,000 hectares set in 1977. For the minor grains, both oats and rye should show an increase in area from their respective 1980 levels during the eighties as emphasis is placed on expanding grain area in higher elevations.

Projected yields for the major grains for 1990 are presented in table 6. Much of the gains in average yields registered in 1981-82 can probably be attributed to a 25 percent increase in fertilizer availabilities relative to 1980 as well as somewhat more favorable weather.

Grain production in 1990 is projected at 10.2 million tons, compared with the 1976-80 average of 7.85 million tons. This projection is lower than the official 1985 grain production target of 10.5-11.0 million tons, which includes approximately 200,000 tons of pulses and soybeans. Grain area in 1990 is projected to be only 3 percent below the 1976-80 average.

TABLE 6.—ACTUAL AND PROJECTED AREA, YIELD, AND PRODUCTION OF GRAIN

	Total grain	Wheat	Corn	Barley
1971-75 average:				
Area	2,143	945	630	478
Yield	3.42	3.37	3.98	3.09
Production	7,326	3,182	2,505	1,477
1976-80 average:				
Area	2,159	938	657	485
Yield	3.64	3.75	4.04	3.16
Production	7,849	3,513	2,652	1,532
1981-82 average:				
Area	2,095	1,046	591	366
Yield	4.37	4.47	4.92	3.87
Production	9,162	4,671	2,908	1,415
1990 projection:				
Area	2,100	1,020	600	380
Yield	4.84	5.12	5.34	4.10
Production	10,170	5,225	3,200	1,560

Source: Eastern Europe: Agricultural Production and Trade Prospects Through 1990, FAER 195, February 1984, ERS/USDA.

Introduction of new sunflowerseed hybrids, many from Yugoslavia, was begun in 1980. By 1985 these new hybrids should account for 60 percent of sunflowerseed area and insure through their better yields, higher production by 30,000 tons relative to 1980.[37] Little mention has been made of soybeans. It is possible that disappointing yields have halted plans for future soybean area expansion. In fact in 1982 soybean area declined by one-fourth from the

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[36] Petrov, op. cit.

[37] Stanchev, Vlaicho, "Predpostavki za uskorena intensifikatsiya na selskoto stopanstvo," Planovo stopanstvo, No. 3, 1980.

1981 level. Yield targets for 1985 for both sunflowerseed and soybeans are quite high relative to recent performance, particularly for the latter. Production projections for 1990 are presented in table 7. For sunflowerseed, these numbers assume no spread of the phomopsis disease problems that have affected neighboring Yugoslavia recently. Soybean yields are not expected to show significant improvement and for that reason, soybean area is projected to show little if any expansion from attained levels, primarily because other crops will continue to be more profitable.

TABLE 7.—ACTUAL AND PROJECTED AREA, YIELD, AND PRODUCTION OF SELECTED CROPS

	Sugarbeets	Potatoes	Sunflowerseed	Soybeans
1971–75 average:				
Area	60	29	259	22
Yield	2,852	12.24	1.70	1.54
Production	1,7111	355	440	34
1976–80:				
Area	66	35	233	83
Yield	27.68	10.57	1.68	1.37
Production	1,827	370	392	114
1981–82 average:				
Area	57	38	255	82
Yield	23.30	11.42	1.87	82
Production	1,328	434	478	110
1990 projection:				
Area	60	40	270	100
Yield	31.67	11.50	2.00	1.60
Production	1,900	460	540	160

Source: Eastern Europe: Agricultural Production and Trade Prospects Through 1990, FAER 195, February 1984, ERS/USDA.

In recent years Bulgarian sugar beet production became overcentralized, as 7 local Industro-Agricultural Complexes (IAC's) were established to specialize in sugar beet and sugar production. The resulting disregard for proper rotation cycles led to growing disease problems and plummeting yields. This situation will likely take a number of years to overcome. Other problems plague Bulgarian sugar beet production. Sugar beet yields are reduced by an average of 30 to 40 quintals per hectare because of improper thinning and a further 50 to 60 quintals per hectare as a result of harvest losses.[38]

Bulgaria is an important producer of tobacco. By 1985 tobacco production is planned to reach 155,000–160,000 tons compared with the 1976–80 average of 141,000 tons; a fairly modest increase. Most of the increase will be accounted for by Virginia rather than oriental varieties.

Emphasis in the plan has been placed on improving year-round supplies to the market of fruits and vegetables. Specialization and joint production with CMEA nations in fruit and vegetable production will be stressed. Grape production is to be gradually reduced in the northern regions while being expanded in the southeast. This regionalization alone will supposedly increase grape production by 60,000 tons by 1990 and help to reduce year-to-year variability in production.[39]

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[38] "Bulgarskata sakhar," Otechestven front, Apr. 24, 1981.

[39] Stanchev, Vlaicho, op. cit.

V. LIVESTOCK PRODUCTION ASSESSMENT

Though livestock production grew at a rate of 22 percent during 1976–80, current consumption levels remain well short of the long-term nutritional targets adopted by the Bulgarian Government. For this reason, further increases in livestock production are planned. Such production is now officially expected to increase somewhat more slowly during 1981–85 than actual performance during the previous five year period. This slowdown reflects problems in increasing domestic feed production and an unwillingness to greatly expend feed imports.

Within the livestock sector, cattle and sheep raising will be emphasized and greater reliance on forages in comparison with concentrated feeds is expected. The emphasis on cattle contrasts with 1976–80 when poultry inventories increased most rapidly (table 3). The plan guidelines for 1981–85 indicate that little effort will be made to increase poultry and hog production for export, probably reflecting the lack of profitable markets for Bulgaria.

TABLE 8.—BEGINNNING YEAR LIVESTOCK INVENTORIES, 1971, 1976, 1981

[Thousand head]

	1971	1976	1981
Cattle	1,279	1,656	1,796
Of which: cows	589	670	702
Hogs	2,369	3,889	3,808
Sheep	9,678	10,014	10,433
Poultry	33,706	38,061	41,636
Horses	170	133	120

Source: Statisticheski godishnik, various editions.

Increases in livestock production are to be assured not only through greater domestic feed availability, but also through a number of measures aimed at making livestock raising more efficient. These measures include the introduction and expansion of improved animal types and breeds, and improved quality of feed production and ration formulation. In addition, a number of measures will depend directly on economic reform at the farm level, including attempts to improve care of animals so as to reduce mortality rates, increases reproductive rates and insure more regular and consistent feeding of animals.

By placing emphasis on cattle production, Bulgaria hopes to limit the growth in demand for concentrated feeds. Between 1971–75 and 1976–80 beef and veal production increased 30 percent and milk production 22 percent (table 9). However, Bulgarian cattle raising remained well behind West European standards for feed conversion efficiency, average daily weight gain and average slaughter-weight.[40] Poor quality nongrain feeds and the difficulty in profitable raising of cattle on an industrial basis have contributed to the lack of development.

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[40] Milushev, Yordan, "Putishta za intensifikatsiya na proizvodstvo na teleshko i shelesko meso", Zhivotnovudstvo, No. 4, 1980 and Krustanova, Stanka, "Sustoyanieto na govedovodstvoto v stranata i po-natatushnoto mu efektivno razvitiye," Ikonomika na selskoto stopanstvo, No. 1, 1980.

TABLE 9.—ACTUAL AND PROJECTED LIVESTOCK PRODUCTION

	1971–75 average	1976–80 average	1980–82 average	1990 projection
Total meat [1] (thousands of tons)	574	745	810	975
Beef	113	143	152	175
Pork	242	349	390	475
Poultry	117	149	149	195
Other	102	104	119	130
Cow's milk [2]	1,358	1,653	1,915	2,310
Eggs (millions)	1,758	2,163	2,478	3,050

[1] In carcass weight.
[2] 1 liter = 1.031 kilograms.

Source: Eastern Europe: Agricultural Production and Trade Prospects Through 1990, FAER 195, February 1984, ERS/USDA.

Along with cattle raising, the plan for 1981–85 mentions sheep raising as a priority area in the livestock sector. Sheep numbers are expected to be up by 1.5 million, or nearly 15 percent, by 1985 compared to 1980. Particular emphasis is being placed on increasing sheep milk production. Bulgarian hog raising has largely been placed on a modern, industrial basis, with feed conversion ratios only moderately behind Western standards. For the current decade, gains in Bulgarian pork production will be moderated by only small increases in feed supplies for hogs.

Though it was not singled out in the 1981–85 plan as a priority, poultry raising is likely to increase substantially during the eighties. One Bulgarian report called for a 20 percent increase in egg production per capita and more than a 40 percent increase in poultry meat production by 1985 relative to 1980.[41] Both targets are unlikely to be met, but may be indicative of intentions to continue expansion of the poultry sector. Long-term goals for the broiler industry resemble efficiency levels attained in the West for feeding efficiency, finishing time and average slaughterweight. As Bulgarian specialists indicate, for anything approaching these targets, protein availability in Bulgarian feed rations must be increased significantly and more breeding work will likely be required.

Very large livestock procurement price increases since 1979 have helped to improve the profitability of livestock raising. However, the underlying problem of rapidly increasing production costs must be brought under control for the maintenance of livestock growth over the long term. Interestingly, much of the production increase in meat and eggs during the early eighties was accounted for by the private sector and is likely a result of the more favorable private sector policies outlined above. Assuming a limitation on how far such a strategy of facilitating private sector production can be pursued in the future as well as limited positive impact of the NEM policies in the socialist livestock sector, projections for livestock production in 1991 are presented in table 9.

In general, livestock production growth rates in the eighties are expected to be lower than those of the seventies, particularly for meat. Nearly all the increase in milk production is expected to come from higher milk yields rather than expanded cow inventories. In recent years milk yields have been increasing regularly following a decade of near-stagnation. Egg production is expected to respond most readily to the higher grain-for-feed supplies of the eighties.

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[41] "Kum nov podyem v razvitiyeto na ptitsevudstvoto," Zhivotnovudstvo, No. 6, 1980.

VI. Trade Prospects

Bulgaria follows Hungary as the largest net agricultural exporter in Eastern Europe. From the mid-seventies, Bulgaria's agricultural trade surpluses gradually increased through 1980 (table 10). Following the disappointing production year of 1980, the positive agricultural trade balance declined in 1981. Though complete data are not yet available, the long-term growth trend was likely resumed in both 1982 and 1983 largely on the strength of higher agricultural exports.

TABLE 10.—BULGARIAN AGRICULTURAL BALANCE OF TRADE, 1976–81

[In millions]

	1976	1977	1978	1979	1980	1981
Agricultural exports	$955	$1,036	$1,057	$1,253	$1,424	$1,142
Agricultural imports	504	447	498	594	610	722
Balance	451	589	559	659	814	420

Source: FAO Trade Yearbook, various editions.

A. Imports

Bulgaria has attempted to maintain, as best it can, self-sufficiency in agricultural commodities. In 1980 and 1981, four commodities—corn, raw sugar, cotton, and soybean meal accounted for over sixty percent of total Bulgarian agricultural imports. Other major imports have recently included tobacco, cocoa beans, wheat, barley, citrus fruit and potatoes (table 11).

TABLE 11.—MAJOR BULGARIAN AGRICULTURAL IMPORTS, 1979–81

[Dollars in millions]

Item	1979	1980	1981
Corn	$33.7	$111.0	$172.0
Wheat	$78.0	$6.6	$12.6
Barley	$57.0	$.2	$.2
Sugar, raw	$84.0	$113.0	$131.0
Soybean meal	$34.0	$49.0	$65.0
Tobacco, raw	$23.2	$36.1	$39.0
Cotton	$77.0	$94.0	$87.0
Share of total agricultural imports (percent)	65	67	70

Source: FAO Trade Yearbook, 1980, 1981, and 1982.

Sugar and cotton imports are satisfied by trade arrangements with Cuba and the USSR respectively. Tobacco is imported from non-CEMA nations for mixing with domestic oriental varieties. The primary agricultural imports from outside CEMA, though, are grain and oilseed meal. Based on grain and livestock projections above, Bulgaria is expected to remain a marginal net exporter of grains through the rest of the decade. A projection of 1990/91 grain utilization is provided in table 12. In normal years, wheat exports in excess of 500,000 tons are expected to be partially balanced by continued imports of coarse grain, particularly corn. In exceptionally favorable or unfavorable weather years, net exports are expected to fluctuate up or down from the above projection. The implication is that coarse grain imports will not be as high for the rest of the decade as they were in 1980 and 1981.

TABLE 12.—*Projected 1990/91 Bulgarian grain utilization*

	Thousands of tons
Production	10,170
Feed use	7,491
Other use	2,666
Total use	10,157
Net exports	+13

Protein deficiencies remain a problem in Bulgarian livestock rations. Attempts to force greater self-sufficiency in protein supply during the Seventh Five Year Plan apparently did not prove successful. Based on projections for the livestock sector and domestic oilseed projection, imports of 400,000 tons of oilseed meal—in soybean meal equivalent—are projected for 1990/91 (table 13). This is well above the average of 1976-80 of about 195,000 tons. Assuming a major effort is made to upgrade Bulgarian feed rations, actual oilmeal imports in 1990/91 could be even higher.

TABLE 13.—*Projected 1990/91 oilseed meal* [1] *production, utilization, and net trade in soybean meal equivalent*

	Thousands of tons
Production from domestic sources	303
Use for feed	701
Net imports [2]	398

[1] Including fishmeal.
[2] Including seeds in soybean meal equivalent.

B. Exports

The most important Bulgarian agricultural exports include raw tobacco, wine, meat, live animals for slaughter, wheat, cheese, vegetables and fruit (table 14). Though Bulgaria is an important supplier to other CEMA countries, agricultural exports are an important source of hard currency from markets in Western Europe and the Middle East. This is particularly true of exports of animals and animal products.

Higher exports of grain, animal products and wine are expected through 1990 compared with the late seventies. Modest growth at best is anticipated for exports of tobacco, fruit, and vegetables.

TABLE 14.—MAJOR BULGARIAN AGRICULTURAL EXPORTS, 1979–81

[Dollars in millions]

Item	1979	1980	1981
Tobacco, raw	$194.0	$210.0	$181.0
Wine	$180.5	$185.7	$161.0
Fresh/frozen meat	$148.9	$157.4	$120.9
Wheat	$87.0	$117.0	$64.0

TABLE 14.—MAJOR BULGARIAN AGRICULTURAL EXPORTS, 1979–81—Continued

[Dollars in millions]

Item	1979	1980	1981
Live sheep	$65.0	$71.0	$71.7
Cheese	$51.8	$68.0	$61.0
Canned meat	$32.0	$62.1	$5.5
Tomatoes, fresh	$29.0	$29.6	$35.8
Grapes	$22.4	$19.0	$28.8
Share of total agricultural exports (percent)	65	65	64

Source: FAO Trade Yearbook, 1980, 1981, and 1982.

C. Implications for U.S. Trade

United States agricultural trade with Bulgaria is small. Corn and soybean meal alone account for roughly 90 percent of U.S. exports, while tobacco accounts for over 80 percent of U.S. imports (tables 5 and 16). Bulgaria is currently ineligible for CCC programs. The agricultural trade balance has recently run heavily in favor of the United States.

TABLE 15. U.S. AGRICULTURAL EXPORTS TO BULGARIA, VOLUME AND VALUE, 1976–80 AVERAGE, 1980, 1981, AND 1982

Item	Volume (thousands of tons)				Value (millions of dollars)			
	1976–80 average	1980	1981	1982	1976–80 average	1980	1981	1982
Corn	240	635	934	279	27.8	80.1	134.0	32.0
Soybean meal	73	196	214	107	16.9	47.9	52.1	23.4
Other	(¹)	(¹)	(¹)	(¹)	6.0	10.9	17.5	8.7
Total	(¹)	(¹)	(¹)	(¹)	50.7	138.9	203.6	64.1

¹ Not applicable.

Source: Eastern Europe, World Agriculture Regional Supplement; Review of 1982 and Outlook for 1983, ERS/USDA, 1983.

The prospects for expanded U.S. agricultural exports to Bulgaria are mixed at best. For the remainder of the decade corn exports are likely to approch the levels of 1980 and 1981 only following years of serious drought. Given normal weather, they are likely to be closer to the 1976–80 average of 240,000 tons. The outlook for soybean meal exports is brighter, though two factors could interfere with higher exports. First, U.S. soybean meal exports to Bulgaria benefited in recent years from the Bulgarian decision not to import Brazilian meal, because of possible disease problems. In 1982 this ban was apparently lifted and the United States now faces tougher competition. Second, the projection of higher Bulgarian soybean meal imports is based on the livestock projections presented earlier and the recognized need to improve protein supplies in the feed ration. Growth in soybean meal imports could be restrained by sacrificing somewhat growth in the livestock sector.

Without expanded trade in other commodities it will be difficult for U.S. agricultural exports to approach the 1981 record level of $200 million in coming years.

TABLE 16.—VALUE OF U.S. AGRICULTURAL IMPORTS FROM BULGARIA, 1976–80 AVERAGE, 1980, 1981, AND 1982

[In millions]

	1976–80	1980	1981	1982
Tobacco	$17.7	$14.5	$18.2	$17.7
Other	2.2	2.9	3.3	4.0
Total	19.9	17.4	21.5	21.7

Source: Eastern Europe, World Agriculture Regional Supplement; Review of 1982 and Outlook for 1983, ERS/USDA, 1983.

CZECHOSLOVAKIA

THE CZECHOSLOVAK ECONOMY IN THE 1980'S

By Friedrich Levcik*

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I. THE HERITAGE OF THE SEVENTIES

The Czechoslovak economy entered the 1980's with distinct weaknesses and disproportions accumulated in the past. In none of the preceding five years could the plan targets be met. Especially in the closing stage of the past Five-Year-Plan period 1976–1980 the deceleration of economic growth became pronounced. Compared with the period 1971–1975 growth of National Product—even according to official, evidently insufficiently deflated data—slackened by more than 2 percentage points per annum and reached an annual average of 3.6 percent for the period 1976–1980 and under 3 percent for the two last years of the past decade.

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It is true that at that time the international economic environment deteriorated with the second boost in crude oil prices, the setting in of a drawn-out recession in the western market economies, and the growing imbalances of the international financial markets. But it should be emphasized that the problems and difficulties of the Czechoslovak economy were primarily of domestic origin. The reintroduction of the outdated directive planning and management system at the beginning of the seventies destroyed and successively perverted the motivations of enterprise management and of the work force with adverse results for the economy. Inefficiency, waste of resources and production without regard for quality and effective demand became widespread.

Labour productivity decelerated considerably and capital productivity (output per unit of fixed capital) declined compared with the first half of the seventies. The material inputs grew at a faster rate than value added and the share of deliveries of industrial goods for final use shrank while that for intermediate use increased by another 3.2 percentage points between 1975 and 1980 (Tables 1, 2, 3). Heavy industry again received a growing share of investments and of additions to capital stock, so that the energy and raw material intensive industrial structure of the economy was strengthened regardless of the poor energy and raw material endowment of the country.

Notwithstanding the fact that the Czechoslovak authorities devoted growing amounts of financial and manpower resources to research and development the technical level of industrial production deteriorated during the seventies. The share of new products in total value of production shrank and reached only 10.7 percent by 1980. The share of products classified by the Czech authorities as being at "World technical and economic level" in the total value of new products declined from 40 percent in 1970 to 22 percent in 1980 and their share in the total value of production declined from about 5 percent in 1970 to 2 percent by 1980. In 1970 some 27 percent of new products was still classified as suitable for foreign markets; by 1977 this share had already dropped to 14 percent (Tables 4, 5).

Both structural weaknesses and the deteriorating technical level of industrial production contributed to the external imbalances in trade relations with the developed market economies and with the USSR. By 1979 the mounting trade deficits reached a total of US $1.1 billion for all trading areas taken together.

An indication of the increasing technological gap is the loss in market shares in engineering products. Whereas Czechoslovakia still supplied 2.8 percent of engineering products to the world in 1965, this share has dropped to 1.5 percent by 1980. The loss in market share was pronounced not only in relation to the OECD and developing countries but even within the CMEA area (Table 6).

Losses in market shares were not confined to engineering products. In her exports to the OECD countries Czechoslovakia lost one third of her initial market share in 1970 during the seventies. In dollar terms the loss in market share during the decade amounted to US $1025.2 million of which 43 percent were due to loss in competitiveness and 57 percent due to structual effects (export of commodities for which the import demand of the OECD countries lagged behind the average demand) (Table 7).

The terms of trade losses of 18 percent during the seventies [1] are in part only the consequence of the disparate development of primary commodities (especially fuels) and finished products, but, to a good deal, due to the loss in competitiveness in foreign markets (Table 8).

The slow-down in economic development together with the terms of trade losses and the efforts to narrow down the trade deficits by import restrictions resulted in a pronounced slackening of the growth of the national product for domestic use. Private consumption actually shrank in the last two years of the past decade and the same applies to real wages of workers and employees.

II. THE FIVE-YEAR PLAN FOR 1981–1985

In the course of constructing the Five-Year Plan for 1981–1985 the Czechoslovak planning authorities were confronted not only with the structural weakness and the declining efficiency of the economy inherited from the past but also with deteriorating external conditions. In relation to the Soviet Union, Czechoslovakia's main supplier of fuels, energy and raw materials, it was necessary not only to anticipate—in view of the moving five-year-average price basis—further heavy terms of trade losses but even more burdensome to make do with severe limitations in deliveries of fuels, especially of crude oil. In relation to the developed market economies the recession made it even more difficult to envisage an export expansion to close the trade deficit.

Under such adverse conditions the only realistic attitude to the future development was a drastic curtailment of planned growth as an adjustment to the changed conditions. It speaks for the mounting difficulties that the Czechoslovak planning authorities were obliged several times to scale down their expectations as to possible economic growth during the first half of the 1980s. Whereas an overall growth rate of over 3 percent per annum still seemed feasible in October 1980, the plan guidelines published in February 1981 had to lower the target to well under 3 percent per annum: finally, in the law on the 7th Five-Year-Plan 1981–1985 promulgated in December 1981, the growth rate for the National Product was set at 2.0–2.6 percent. Similarly the targets for industrial production and agricultural output had to be scaled down.

Expectations fell most strikingly in regard to domestic use of National Product. In view of the necessity to restore the external equilibrium in relation both to the USSR and to the developed market economies, the major part of the modest increments in output planned had to be earmarked for planned export surpluses.

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[1] Till 1983 the terms of trade deteriorated by another 11 percent.

In addition, the anticipated worsening of the terms of trade diverted part of the increment in planned production from consumption or investment to the trading partners, especially the USSR but also to the so-called non-socialist countries, enabling the servicing of the debt with the aim to reduce substantially the debt.

Accordingly no growth could be foreseen for domestically distributed national income, although an annual growth rate of 2 percent had still seemed feasible in the autumn of 1980. In particular, the volume of investment was to be kept under or near the level reached in 1980. The Five-Year-Plan legislation provided no information whatsoever on the development of consumption, real income or retail turnover, a clear indication that the planning authorities were assuming that the situation would worsen but were reluctant to make this public (Table 9).

More detailed information was made available in the plan, or in documents accompanying it, on the necessity of structural adjustments, and especially on meeting the import limitations on fuel and energy. It was therefore decided to secure the necessary increments in primary energy mainly from domestic sources. For this reason increasing amounts of the limited investment resources had to be earmarked for developing the already overextended brown coal deposits with rising costs, a deteriorating quality of coal and grave injury for the environment. Additional investment sources had to be devoted to the rapid development of a net of nuclear electrical power stations. A detailed account on these developments foreseen in the Five-Year-Plan 1981–1985 was given by this author in the last JEC volume on Eastern Europe.[2] Likewise an account was given on further plans to change the industrial structure by giving greater weight to branches dependent on indigenous raw material sources and by scaling down the growth of industrial branches heavily dependent on imported fuels and raw materials. Accompanying the Five-Year-Plan document was a new "Set of measures for improving the planning and management system," a document which was mainly prominent for its eclectic and in parts contradictory nature. An analysis of this "set of measures" was also given in the last JEC volume.

III. THE FIRST TWO YEARS OF THE CURRENT FIVE-YEAR PLAN

The actual development of the economy in 1981 and 1982 indicates that the difficulties confronting Czechoslovakia at the beginning of the eighties were even greater than those envisaged by the planning authorities when the five-year plan was drawn up. First of all, domestic and imported primary energy supplies have turned out to be considerably lower than envisaged under the five-year plan period 1981–1985. Instead of the expected increment of almost 12 million tons of hard coal equivalent (hce), primary energy consumption can increase at best by 5 million tons hce over the planning period. Up to now domestic use of primary energy stagnated at the level of 1980, and actually in 1983 was under this level by

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[2] F. Levcik, "Czechoslovakia: Economic Performance in the Post-reform Period and Prospects for the 1980s" in: *East European Economic Assesment, Part 1—Country Studies, 1980.* A Compendium of papers submitted to the JEC. Congress of the United States, US Govt. Printing Office, Washington D.C. 1981.

1.2 million hce. Very likely also for 1984 there were no substantial increments over the level of 1980. The main reason for this deviation from the Five-year plan lies in reduced oil deliveries from the USSR. While crude oil imports in 1980 amounted to 19.3 million tons, the bulk of which came from the USSR, the present import level of crude oil has shrunk to 16.6 mill. t (16.4 mill. t from the Soviet Union). Another reason lies in the delays in increasing coal extraction from the overextended brown coal fields and in commissioning on time the new nuclear energy plants. The reduced targets for any increase in primary energy supplies will be forthcoming at best in the final year of the five-year plan period if the new gas pipeline from the USSR will be in operation on time, and if it will be possible to fulfill the nuclear power station programme. The delays in the construction programmes make it, however, almost certain that during the planning period 1981–1985 the nuclear power plants will give considerably less electrical energy than envisaged.

Another adverse factor for the Czechoslovak economy in 1981 and 1982 was the recession in the Western market economies which—together with the tighter credit policy pursued, since the Polish inability to serve the debt, by western commercial banks vis-à-vis all East European countries—is impeding Czechoslovakia's foreign trade with the West, and is forcing her to severe import cuts to meet her financial obligations.

As a result of the intra-CMEA price mechanism which delays transmission of price developments in the world market, the oil price charged by the USSR is still rising, at a time when crude oil prices are falling on the world market. The terms of trade vis-à-vis the USSR are therefore still deteriorating sharply, and in addition the USSR is demanding deliveries of commodities (like food) which are in short supply in Czechoslovakia herself, or are extremely energy intensive, in exchange for increased oil deliveries.

If we add to all these impediments from abroad the inbuilt systemic inefficiency of an overcentralised planning system and the absence of motivations in an indifferent or uncooperative work force, it is easy to understand the recent adverse development of the economy.

In 1981 the net material product shrunk by 0.1 percent and in 1982 it increased marginally by 0.2 persent (according to most recent official data).[3] The development of the domestic use of the national product (after adjustment for losses and trade balance) was even worse, with a decrease by 3.4 percent in 1981 and further 1.6 percent in 1982.[3] This reflected a worsening in the terms of trade and the need to achieve a surplus in the trade balance to service the debt, given that no new commercial credits were forthcoming (Table 10).

Industrial production grew in 1981 by 2% and in 1982 by 1%, but the greater part of this increase went to hardly saleable stocks. Minor relative savings in material costs were achieved, but labour productivity nearly stagnated. The individual branches of industry performed variously in 1982: machinery (2.9%), electrotechnical industry (4.8%), light industry (1.6%) and electricity production (1.6%) have grown while iron and steel (−0.4%), chemicals (−0.3%), construction materials (−1.5%), and food (−0.8%) industries contracted.

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[3] According to earlier also official reports the drop of both, NMP produced and NMP used was more pronounced. Cf. Statistická rocenka CSSR 1982, pp. 148–9; and 1983, pp. 163–7.

The construction industry decreased its output in the two years 1981 and 1982 by 5.5 percent. Fixed capital investment dropped by almost 7 percent with labour productivity in construction decreasing by 4%, partly because significantly fewer new construction projects were started.

Agriculture as a whole performed somewhat better in 1982 (4.4 percent) than in the previous year (−2.5%), live stock production, however, decreased by 2% (−0.5% in 1981). Because of the poor harvest in 1981 and limited animal feed imports, herds had to be reduced and meat production dropped significantly in 1982 (−9.8%).

In foreign trade both exports and imports increased by roughly 9% (at current prices) in 1982. Trade with non-socialist countries (Western market economies and developing countries), however, dropped 1982 for the second year running. Due to the greater decline of imports (−6.5%) than exports (−1.4%) a trade surplus with the non-socialist countries was achieved even though the negative development of the terms of trade continued.

The second year of export surplus achieved by severe import restrictions led not only to a slight lowering of foreign indebtedness but also to a further decline in living standards. Retail trade turnover grew by 2.9% in nominal terms. As the prices of meat, meat products, alcohol and tobacco were radically increased in January 1982, the overall retail price level rose by 5.8 percent (food by 10.6 and industrial goods by 1.5 percent) so that trade turnover in real terms decreased by 2.8 percent (sales of food products shrank by 5.4 percent).

The average real wage of workers and employees declined even by 2.3 percent in 1982 (see Table 10).

IV. Modest Recovery in 1983 and 1984

After the years of crisis and painful adjustment to the changed conditions 1983 at last brought a slight recovery of the economy. In this adjustment process first priority was given to regaining the external balance under conditions of a slack in world trade, of still increasing crude oil prices (in deliveries from the Soviet Union), high interest rates, and a tight credit policy exercised by the commercial banks. Considering these adverse conditions the regained modest growth of National Product by 2.2 percent in 1983 is a partial success, as it was achieved with relatively lesser inputs of fuel and energy.

Gross industrial production grew by 2.8 per cent, considerably faster than envisaged by the yearly plan, and labour productivity, too, advanced by more than 2 per cent after years of near stagnation. Agriculture advanced by 4.2 per cent but contrary to the plan overall crop production increased only modestly, notwithstanding an excellent grain harvest, because of crop failures in technical plants and fodder crops. On the other hand, against the plan intention animal production grew by 5.4 per cent involving increased imports of feed or a new cutback in livestock production in the following year.

Likewise against the plan intentions Gross capital investment grew by 0.6 per cent instead by receding by over 2 per cent. This further retrenchment of investment activity was deemed necessary to keep up consumption as most of the planned increment of national product was earmarked for improving the external balance under conditions of deteriorating terms of trade.

However, the official statistical report claims a growth in private consumption of 2.1 per cent and of public consumption of 3.8 per cent. This becomes feasible, because accumulation had dropped considerably (−7.3 per cent).[4]

A growth in Retail trade turnover, not only at current prices but also in real terms by 2 per cent is also reported, and consumer prices of goods and services are said to have grown by 0.9 per cent only. Average real wages are said to have risen by 0.8 per cent, implying an increase in the cost of living by 1.1 per cent (see Table 10).

Foreign trade development in 1983 was somewhat faster than the year before with imports growing by 9.4 and exports by 9.0 per cent. The overall trade balance was again positive, but the surplus was considerably smaller than in the two previous years. In trade with the so-called non-socialist countries (developed market economies and developing countries taken together) the trade surplus increased from $484 mil. to $771 mil. (Trade with the developed market economics was nearly balanced). On the other hand, the trade deficit with the socialist countries more than doubled, reaching more than 409 mil. rouble (US $552 mil. according to the official $/Rouble exchange rate). From incomplete data it can be assumed that the trade deficit with the Soviet Union was even larger while in trade with the other socialist countries a trade surplus was achieved.[5] There is no reference that the trade targets vis-a-vis the USSR were not realised, it is therefore likely that the Soviet Union, aware of her terms of trade gains, did not insist on balancing the accounts in value terms as long as the contracted shipments from Czechoslovakia in physical units or volume terms were more or less met.

The picture of performance in 1983, too, had some blemishes, as indirectly admitted by official reporting. The volume of stocks has risen beyond reason (in industry alone by Kcs 4 billion representing roughly a fifth of the total increment in industrial production), a clear indication that production does not sufficiencly take into account the demand of customers at home and abroad. In construction the volume of unfinished structures was still very high and was tying up resources which were 17% higher than the value of total gross investments in 1983. Export tasks in relation to the so-called non-socialist countries could be fulfilled only the underpricing and by exporting goods in short demand at home, like petroleum products. Notwithstanding some advances in the application of new technology it is officially admitted that the influences of science and technology on the number of innovations, on the quality and up-to-dateness of products, and on the improvement of technological production processes is still small. Inflationary pressures continued as witnessed by a net increase in deposits of savings accounts and cash in hand by more than Kcs 16 billion, almost twice as much as the total increment in retail trade turnover at current prices.

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[4] The official report claims some drop in net additions to fixed capital stock and in the volume of unfinished construction but admits the unplanned growth of stocks in industry.

[5] The Czechoslovak Prime Minister L. Strougal claimed in a statement to the Federal assembly that Czechoslovakia is endeavoring to balance its current account with the USSR, while a trade surplus is being achieved with the other Socialist countries. Rudé Pŕvo, 22 March 1984.

The recovery continued throughout 1984 and the official plan fulfillment report of the Federal Statistical Office carries the optimistic headline "Favourable encouraging results; (Rudé Právo, 28 January 1985). The gross national income produced grew by 3.2 percent (the growth of the net national income (NMP) comparable to the performance of earlier years can be estimated at 2.7 percent), somewhat faster than the year before. Both, gross industrial and agricultural production contributed to the advance.

Gross industrial production increased by 3.9 percent, faster than planned and the year before, but low efficiency, poor quality of many products and insufficient innovation of the product mix seem still to be widespread. So called "new products" represented 18 percent of industrial output, i.e., about the same share as in 1983 but new products introduced into production in 1984 took a much smaller percentage of industrial output (7 percent in 1983). Labour productivity advanced somewhat faster than in 1983 but energy and overall material consumption in production are still higher than planned. Though the plan for energy savings was formally met, total electricity consumption grew by 3.1 percent (production by 2.7 percent) and the unplanned increase had to be covered by outdated caloric electricity plants to the detriment of the environment. Electricity generated at nuclear plants represented 9.5 percent of the total, below the plan, since the third reactor (440 MW) at Jaslovské Bohunice in Slovakia could not be brought into operation before December 1984. Another planned, but postponed reactor at Dukovany in southern Moravia started trial operation as late as February 1985. With stagnating oil imports and the additional gas pipeline not yet in operation, brown coal haulage represented the only source to cover the increased energy consumption.

The intended structural changes in individual branches of industry were only partly successful. The iron and steel industry grew by 2.1 percent though according to the planners intention a drop in output was planned. Machinery developed in accordance with the plan (+6.5 percent) mainly thanks to a faster growth of electrical engineering industry (+12.2 percent) which outweighed a slower growth of heavy engineering (+2.6 percent). Chemicals increased output by 3.4 percent even with lower amounts of crude oil processed. The wood processing industry with the above average growth of 4.3 percent was the only branch which did not meet the official plan target.

Gross agricultural production increased by 3.6 percent and both, crop production and animal production advanced though heads of cattle and pigs had to be lowered. A notable easing was experienced in Czechoslovakia's fodder grain imports. Some years ago as much as 2mn t of grain had to be imported, now less than 0.5 mn t will probably be needed during the current year. This may allow increased imports of protein feeds.

After several years of a reduction or stagnation of gross fixed investments, investment activity advanced relatively fast and apparently gross investments at constant prices grew in 1984 by over 4 percent. The central authorities seem to have given way to pressures of the enterprises for more investments, said to be needed in order to meet the increased output targets. The pattern became apparent already in 1983. In 1984 not only total investment activities grew faster than the national product but also the share of new investment starts in the total investment volume increased considerably.

In foreign trade the global targets were overfulfilled in 1984, but the effects on the domestic economy were unfavourable in view of continuing terms of trade losses. In trade with socialist countries, exports and imports grew at about the same rate (12.1 resp. 12.4 percent) and the trade deficit amounted to TR 560 mn. Because of the gradual increase of energy prices, the 1980–1985 cumulated trade deficit with this region, practically with the USSR only, will reach approximately TR 2 billions, in spite of reduced or stagnating Soviet energy deliveries and an increased volume of Czechoslovak exports to the Soviet Union. In trade with non-socialist countries (OECD and developing countries together) a trade surplus of about US $800 nm was achieved. This relative success entailed, however, a continuation of import restrictions and the pushing of exports of raw materials and other intermediate products since many of the traditional manufactured exports, especially machinery, are not sufficiently competitive in Western markets.

Both, terms of trade losses in trade with the USSR and efforts to generate export surpluses in convertible currencies to repay step by step the entire hard currency debt restricted the volume of the national income available for domestic use. It can be estimated that the NMP distributed advanced much less than NMP produced, perhaps by some 1.7 percent. With the cost of living index and retail prices advancing according to official reporting by 1 percent, the per capita money income of the population rose only by 1.3 percent and real wages by 0.7 percent (see Table 10).

V. Juggling With Statistics

According to the valid planning methodology and to conventional statistical reporting in Czechoslovakia the main indicator of economic development during the current 5-Year Plan period, the growth of the national product, was determined hitherto by using the concept of the Net Material Product (NMP). According to this concept which is restricted to the so-called material sphere (excluding non-material services like government, financial and insurance activities, education, health etc.), all intermediate inputs (so-called productive consumption) including depreciation charges in the material sphere are being deducted from the global product. NMP thus defined was to increase during the current 5-year Plan period with an average annual rate of 2 to 2.6 per cent or altogether during the period by 10.4 to 13.7 per cent. Since the end of 1983 the Central Planning Commission is using alike for reporting of plan fulfillment and of announcing planning targets for the yearly plan the concept of Gross Material Product.[6] Also the Statistical Yearbook 1983 published for the first time side by side with the so far exclusively elaborated net aggregates of national accounting also data on the development of the Gross Material Product since 1977.[7] The sudden interest of Czechoslovak planning and statistical officials in the Gross concept which includes depreciation charges (and in so far comes closer to SNA concept though still excluding the so called non-material services) can be explained by the fact that with a slack in investment activity experienced in the last 5 to 6 years the ratio of depreciation in gross investments is increasing and vice versa that of net investments is shrinking (Table 11).

Under these circumstances gross concept growth rates were since 1978 consistently higher than net concept ones. In 1981 the National Product decreased and in 1982 stagnated according to the net concept but advanced in both years according to the gross concept (Table 13, 14, 15). The Statistical Office in its Plan Fulfillment Report for 1984 [8] likewise used macro-economic indicators according to the gross concepts and that may explain, at least in part, the reported success story. In this case it is necessary to scale down some of the growth rates officially reported. The increase of the Net material product in 1984 would amount to about 2.6 per cent only (instead of 3.2 per cent reported). The National Product domestically distributed may have grown by 1.7 per cent only (instead of the reported 2.1 per cent) (see Table 14).

The switch from the net to the gross concept in the national accounts was only one of the statistical methods for polishing up the image of actual economic performance in recent years. Perhaps an even greater impact was produced by the insufficient deflation of the aggregates. Especially the implied price deflators calculated by dividing the national product aggregates at current prices by the same aggregates at constant prices as officially reported yield paradoxical results in the critical years of crisis. According to these computations prices in 1981 would have decreased by 2.6 per cent for the NMP produced and by 1.0 per cent in the case of NMP domestically distributed. In 1982 prices would have advanced by 4.6 and 5.6 per cent respectively. But according to the Wholesale Price Index officially reported prices increased in 1981 by 4.8 per cent and by 7.8 per cent in 1982. Retail prices increased by 0.8 per cent in 1981 and by 5.8 per cent in 1982. All other published price indices—for construction work, fixed investments, agricultural purchasing prices, for inputs into agriculture and foreign trade prices—rose in 1981. It is therefore obvious that the reported NMP figures at constant prices are completely out of tune especially for 1981 but to a lesser extent also for 1982, with the actual price development reported elsewhere in the Statistical Yearbooks (Table 15).

The national income figures are priced at so called "prices of realization," a mixture of wholesale prices in industry and transport, of agricultural purchasing prices,[9] of foreign trade prices, and of retail prices for consumer goods and services. For recalculating the net material product domestically distributed to consumption and accumulation it is possible to disregard the foreign trade prices[10] and the agricultural purchasing prices[11] so that it is sufficient to take into account changes in industrial wholesale and in retail prices.

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[6] Cf. S. Potac, Report to the Central Committee of the C. P. of Czechoslovakia on the Plan of economic and social development for the year 1984, resp. for 1985, Rudé Právo, 25 November 1983 and 6 December 1984.

[7] Statisticka rocenka CSSR 1983, p. 147.

[8] Rudé Právo, 28 January 1985.

A composite index of these two price categories weighted with the respective shares of private consumption and public consumption plus accumulation yields a price increase of 2.6 for 1981 and of 6.6 per cent for 1982 (see Table 15). When applying this composite price index the NMP domestically distributed at realistic constant prices may have shrunk by 9 per cent and the NMP produced by 6.7 per cent during 1981 and 1982. This is necessarily an approximate estimate because it is impossible for an outside researcher to assess accurately the proper weights for the respective components of the NMP. This holds even more so for the NMP produced where also price developments for investments, construction works, for agricultural input and output and for exports and imports have to be considered. An unweighted average of all these officially recorded price changes in 1981 and 1982 yields, however, an even higher price deflator, namely 2.8 per cent for 1981 and 7.8 per cent for 1982.

It should be emphasized that the composite index was constructed from price indices officially reported and no allowance was made for the fact that there is cricumstantial evidence that these indices, especally the retail price index, insufficiently take into account price changes actually occurring.

It is also interesting that the Czechoslovak Statistical Yearbook 1982 reported a drop of the NMP distributed by 4.5 per cent[12] and that only later in the 1983 issue of the St. Y. B. a correction giving a relatively better result (as given in Table 10) was introduced. Also for the NMP produced in 1981 and 1982 a cosmetic facelifting occurred between the earlier and later issues of the St. Y. B. It is therefore debatable if the growth of the economy in 1983 and 1984 was sufficient to make up for the real declines of 1981 and 1982 if appropriate price deflators had been used.

VI. Evaluation of Recent Economic Performance

Leaving aside for the moment the inconsistencies in the figures reported, or their comparability with earlier ones, one gets the impression of a modest recovery of the economy in 1983 and 1984 which is very likely going to continue in the current year and the near future.

The economy seems to have accommodated to less fuel and energy, as well as to fewer imports, a task feasible in the shorter perspective, taking into account the previous waste of resources and the still very high input in relation to output. The improvement seems to have been achieved to a large extent by administrative limitations rather than by improved enterprise motivations. The development of the last two years seems to support the theory of cyclical development also in the centrally planned economies, especially in a smaller foreign trade depended country like Czechoslovakia.[13] The recovery set in and grew stronger after adjustment measures forced on the economy by external and domestic constraints did away with the most tiresome disequilibria and bottlenecks. The main burden of the adjustment process had to be borne by investment activities and by the curtailment of imports. The investment restrictions were accompanied with the concentration on the completion of investment projects. Thus even with negative investment growth rates fixed capital stock increased. The import restrictions restored the balance on current account of the payment balance and enabled the successive repayment of the debt in convertible currencies. With both, the internal and external constraints somewhat loosened the stage was set for the recovery.

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[9] Prices at which the purchasing organisations are buying products from the farms.

[10] As the trade balance is being deducted in this aggregate.

[11] In consumption all products and therefore also food are sold at retail prices and in accumulation the bulk is in the form of investment goods or in changes in industrial stocks.

[12] Statistická rocenka CSSR 1982, p. 149.

To some extent the recovery is taking place outside or even against the plan intentions. This may be explained by the gradual application of the so-called "Set of measures for improving the system of planned management" which introduces some motivational instruments on the level of enterprises and at the same time is keeping and even strengthening the mandatory nature of planning indicators given by the central authorities. This contradiction can be overcome by enterprise management by choosing to obey some and disregarding other plan instructions in the hope of getting away with it.

One should also see the recent modest achievements in proper perspective. After the years of decline or stagnation the National Product produced was only 5 per cent higher in 1984 than in 1980, the base year for the current Five-Year Plan. The National Product distributed reached only 97 per cent (according to the net or gross concept) of the 1980 level. Notwithstanding the advance in 1984 the volume of gross capital investments was still 2 and a half per cent below the 1980 level. There were 91,000 new apartments built in 1984, 39,000 less than in 1980, a decline by 30 per cent. The average real wage was still 2 per cent below the level of 1978 and per capita meat consumption 2 per cent lower than at the outset of the Five-Year plan. One can therefore speak rather of stagnation of the economy than of a dynamic development[14] and in some instances it will take years to regain the level of 1980 (Table 16).

It should also be pointed out that during the adjustment period most of the structural problems remained unsolved and one can see few signs of a decisive shift towards the much invoked "intensive development". The one positive sign—if we take at face value the officially reported growth of the national product—seems to be the lowering of primary energy consumption per unit of NMP by some

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[13] Goldman J.—Kouba K.: Economic growth in Czechoslovakia, Academia, Prague 1967, Fink G.—Levcik F.: "Wachstumverlangsamung im RGW-Raum. Konjunkturcyklus und Strukturkrise" in Schüller A. (editor): Wachstumsverlangsamung und Konjunkturcyklen in unterschiedlichen Wirtschaftssystemen, Berlin 1984. Kosta J.—Levcik F.: Wirtschaftskrise in den osteuropäischen RGW-Ländern, Index, Köln 1985.

[14] Vladimir Kadlec, Prague, February 1984, "Dynamika nebo Stagnace," unpublished manuscript, quoted without authorisation from the author.

5 per cent till 1984. Also labour productivity improved somewhat the last two years and was almost 4 per cent higher in 1984 than at the outset of the current 5-Year Plan. But capital productivity deteriorated each single year and in 1984 it was some 15 per cent lower than in 1980. Total factor productivity is still lower than at the outset of the 5-Year Plan. There is also the official claim that all material inputs in relation to value added have been lowered during the current 5-Year Plan.[15] But the Statistical Yearbook and the last Planfulfillment Report indicate that material inputs per unit of NMP have risen each year even if we believe the reported NMP growth at constant prices (Table 17).

Also for 1985 a growth of Gross Material Product by 3.2 per cent is envisaged and it is claimed that in this way the Five-Year Plan targets will be met. Mr. Potac maintains that therefore no corrections of the original plan targets will be necessary.[16] In his computations, however, he links the original plan targets worked out according to the net concept with the performance measured according to the gross concept. Even so, and assuming that the plan targets for 1985 will be met, an annual growth rate of the Gross material product of 2 per cent will be achieved only. The NMP will show an average annual growth rate of 1.6 per cent, much below the lower end of the 5-Year Plan target. Also the claim that the repayment of still outstanding liabilities vis-à-vis the West will be continued and will lead to a situation where Czechoslovak assets at the end of 1985 will equal the remaining gross debt is of the nature of a half truth. Since the gross debt will amount to at least US 3.2 bn. per end of 1985, the assets required for balancing the indebtedness must obviously include not only Czechoslovak assets at western banks (about $1.3 bn) but also some questionable assets in developing countries, hardly to the considered liquid (see Czechoslovak efforts to reduce export surpluses with these countries).[17]

The question can be rightly asked whom Mr. Potac wants to mislead: His economically less educated fellow leaders, the member countries of the CMEA or the Czechoslovak people. Certainly such juggling with statistics cannot help to improve the standing of and trust in the capabilities of the Czechoslovak economy. According to an analysis of the performance in 1983 and 1984 it seems that the Czechoslovak economy is on the way of a modest recovery and that there are reasons to believe in further improvements in the medium term. A frank disclosure of the situation with consistent statistics would seem to be a better way to regain the confidence of the trading partners than the attempt to gloss over the weak parts of economic performance by statistical omission and by using non-comparable statistics.

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[15] S. Potac, Rudé Právo, 6 December 1984.

[16] Ibid.

[17] S. Potac, ibid.

TABLE 1.—FACTORS OF ECONOMIC GROWTH, 1966–1983

[Annual percentage compound rates of growth]

	Net material product						Industrial production [1]					
	1966–70	1971–75	1976–80	1981	1982	1983	1966–70	1971–75	1976–80	1981	1982	1983
(1) Output	6.9	5.7	3.6	−0.1	0.2	2.4	6.2	6.1	3.5	−0.1	−1.6	2.8
(2) Employment	1.2	.9	.5	.3	.1	.5	1.2	.7	.5	.6	.4	.4
(3) Fixed capital stock	4.4	5.8	6.2	6.5	5.0	4.7	4.3	5.6	6.1	6.7	5.2	4.9
(4) Output per person employed	5.6	4.8	3.1	−.4	.1	1.9	4.9	5.4	3.0	−.7	−2.0	2.4
(5) Output per unit of fixed capital	2.4	−.1	−2.4	−6.2	−4.6	−2.2	1.7	.5	−2.5	−6.4	−6.5	−2.0
(6) Fixed capital per person employed	3.2	4.8	5.6	6.2	5.1	4.2	3.1	4.9	5.6	6.1	4.8	4.5
(7) Factor productivity [2]	4.6	3.3	1.5	−2.1	−1.3	.7	3.9	3.9	1.4	−2.4	−3.3	1.1

[1] Net value added.

[2] Assuming capital elasticity $\alpha = 0.3$, and labour elasticity $(1-\alpha)$.

Source: StatistickáT1 rocenka CSSR, 1972, 1979, 1983, 1984.

TABLE 2.—RELATION OF GROWTH OF OUTPUT AND INPUT

[Average annual compound growth rate in percent]

	1971–75	1976–80	1981	1982	1983
Global output [1]	5.7	3.8	0.3	0.9	2.9
Material inputs	5.8	3.9	.6	1.4	3.2
Net Material product [2]	5.7	3.6	–.1	0.2	2.4

[1] Global output equals NMP and material inputs including depreciation.

[2] Net material product excludes nonmaterial services and is net of depreciation.

Source: Statisticka rocenka CSSR, 1980, pp. 135, 136, 137; Statisticka rocenka CSSR, 1984, pp. 726, 727.

TABLE 3.—STRUCTURE OF SALES OF INDUSTRIAL GOODS

[Percentage shares]

	Total	Sales				
		For intermediate use	For final use	Of which—		
				For investment	For domestic trade	For exports
1970	100.0	63.6	36.4	4.2	16.0	12.6
1975	100.0	63.6	36.6	5.0	15.5	12.2
1976	100.0	63.8	36.2	5.0	15.0	12.6
1977	100.0	65.8	34.2	4.3	14.5	12.0
1978	100.0	64.8	35.2	4.6	14.6	12.4
1979	100.0	65.0	35.0	4.4	14.6	12.4
1980	100.0	66.8	33.2	4.1	13.5	12.0
1981	100.0	66.6	33.4	4.2	13.4	12.0
1982	100.0	65.7	34.3	3.9	14.0	12.8
1983	100.0	65.2	34.8	4.0	14.0	13.0

Note.—Deliveries from producing enterprises and wholesale organizations; computed from absolute data at current wholesale prices.

Source: Statisticka rocenka CSSR 1971–84.

TABLE 4.—THE LEVEL OF NEW PRODUCTS IN CZECHOSLOVAKIA

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Number of products:											
At world technical and economic level	2,956	1,987	2,285	2,260	2,323	2,281	1,473	1,548			
At world technical level but economically less advantageous and below the world technical level	6,684	5,999	6,101	6,622	7,229	7,765					
Value of new products in million Kcs:											
At world technical and economic level	8,199	8,280	10,483	10,791	10,403	10,477	6,234	6,137	8,004	10,758	13,915
At world technical level but economically less advantageous and below world technical level	12,321	11,650	11,823	14,956	20,048	20,914					
Share of new products in total value of production (percent)	12.0	11.4	12.1	13.0	13.2	12.1	8.2	8.8	9.9	11.2	10.7
Share of new products at world level:											
(a) In total value of new products	40.0	41.5	47.0	41.9	34.2	33.4	15.1	13.3	14.6	16.6	21.6
(b) In total value of production	4.8	4.7	5.7	5.4	4.5	4.0	1.2	1.3	1.4	1.9	2.3

Source: Statistická rocenka CSSR 1970–81.

TABLE 5.—THE NATURE OF NEW PRODUCTS IN CZECHOSLOVAKIA

	1970	1971	1972	1973	1974	1975	1976	1977
Total number of new products [1]	9,640	7,986	8,386	8,882	9,552	10,046	23,733	27,187
Out of which:								
Production started in the current year	4,198	3,400	3,461	3,899	3,747	3,659	15,092	18,715
Replacement of outdated products	1,871	1,405	1,267	1,326	1,275	1,638	...	...
Suitable for foreign markets	2,582	2,145	2,304	2,581	2,654	2,644	3,667	3,906
In percentage of total number of types of new products	26.8	26.9	27.5	29.1	27.8	26.3	15.5	14.4

[1] Till 1975 figures for selected branches only (chemcials, engineering and metal working industries, construction materials, wood working, glass, ceramics and porcelain industries); from 1976 all industrial branches.

Note.—These statistics were discontinued after 1977.

Source: Statisticaká rocenka CSSR 1970–1978.

TABLE 6.—SHARE OF ENGINEERING EXPORTS OF CZECHOSLOVAKIA

[In percent]

	In world imports of engineering goods	Of which: within CMEA per cent	In imports of	
			Developed market economies	Developing countries
1965	2.79	18.19	0.36	1.41
1970	2.10	15.33	.32	1.29
1975	1.53	10.39	.26	.63
1977	1.56	11.60	.24	.61
1978	1.48	11.13	.22	.60
1979	1.61	13.34	.23	.62
1980	1.47	13.14	.20	.61

Source: ECE, Bulletin of Statistics on World Trade in Engineering Products, Geneva 1979, 1982.

TABLE 7.—CZECHOSLOVAK EXPORTS TO OECD: COMPETITIVENESS AND STRUCTURAL EFFECTS

[In millions of U.S. dollars]

SITC	Commodity groups	Exports 1970 (1)	Hypothetical increase in exports 1970–80 (2)	Competitive effect (3)	Structural effect (4)	Actual increase in exports (5) = (2) + (3) + (4)	Exports 1980 (6) = (1) + (5)
0+1+2+4+67	Food and raw materials	264.5	1,372.2	−150.6	−586.6	635.0	899.5
3	Energy	51.8	268.7	67.0	147.0	482.7	534.5
5–8 (less 67)	Manufactured goods	279.8	1,451.9	−359.6	−142.4	949.9	1,229.7
	All commodities	596.1	3,092.8	−443.2	−582.0	2,067.6	2,663.7
	In percent		100	−14.3	−18.8	66.9	

Note to Table 7:

Competitive effects are those where Czechoslovakia lost market shares in the respective commodity groups. A negative structural effect arises when the export effort was concentrated on commodity groups for which the import demand of the OECD countries lagged behind the average demand.

The method of calculation of the effects was as follows:

The actual increase in Czechoslovak exports between 1970 and 1980 can be written as:

$dE = E_{80} - E_{70}$

The hypothetical increase in the same period would be:

$dE_h = E_{70} \cdot r^w$ where:

E_{70}, E_{80} = Czechoslovak exports to the OECD countries in 1970 and 1971 respectively

r^w = rate of increase of total OECD imports between 1970 and 1980

One can write:

$dE - dE_h = dC + dS$

where:

dC = competitive effect in export growth
dS = structural effect in export growth.

The two effects are defined as follows:

$$dC = \sum_i E_{i,70}(r_i^c - r_i^w)$$

$$dS = \sum_i E_{i,70}(r_i^w - r^w)$$

where:

$E_{i,70}$ = Czechoslovak exports of commodity i in 1970 to OECD countries

r_i^c = rate of increase of Czechoslovak exports of commodity i to the OECD between 1970 and 1980

r_i^w = rate of increase of total OECD imports of commodity i between 1970 and 1980.

Source: F. Levick and J. Slsolkà: East-West Technology Transfer—Study of Czechoslovakia, OECD, Paris, 1984, p. 18 and p. 31, footnote 6.

TABLE 8.—DEVELOPMENT OF THE TERMS OF TRADE IN CZECHOSLOVAK FOREIGN TRADE

[1967=100]

	Foreign trade		
	Total	With capitalist countries	With socialist countries
1967	100.0	100	100
1968	100.7	102	100
1969	99.7	99	99
1970	105.9	111	99
1971	105.0	111	98
1972	102.8	107	97
1973	101.7	101	98
1974	100.8	103	98
1975	95.7	104	89
1976	93.2	101	88
1977	90.6	91	87
1978	88.8	94	83
1979	87.1	92	82
1980	87.0	93	81
1981	83.3	90	77
1982	80.5		
1983	77.3		

Source: Statisticaká rocenka CSSR 1970 to 1983. K. Dyba, K. Kudlak "Agregatni cenove indexy v cs. zahranicnim obchode a cs. smenne relace 1974–1978" *Statistika* Nr. 8–9, 1979, pp. 370–379 (for years 1967–1977); K. Dyba, V. Kupka "Prizpusobeni ceskoslovenske ekonomiky vnejsim narazum" *Politicka Ekonomie* Nr. 1, 1984, pp. 43–55 (for years 1978–1981).

TABL 9.—DETERIORATION OF GROWTH EXPECTATIONS OF THE CZECHOSLOVAK ECONOMY IN LIGHT OF THE PLAN DRAFTS AND THE LAW ON THE FIVE-YEAR PLAN, 1981–85

	Average annual changes in percent according to:		
	Plan guidelines		Law on 5-year plan, December 1981 [3]
	Autumn 1980 [1]	February 1981 [2]	
National product:			
Produced	3.0–3.2	2.7–3.0	2.0–2.6
Distributed	2.0	0	[4] 0
Industry:			
Gross production	4.0	3.4–3.7	2.7–3.4
Labour productivity		3.2–3.5	2.3–3.0
Agriculture, gross production, total	2.0	1.9	1.4–1.9
Crops	2.8	2.7–3.0	
Animal	1.3		
Gross capital investments	2.0	0	[5] under 0
Private consumption			
Retail trade turnover	2.8		
Average wages	1.8		
Foreign trade turnover		[6] 4.7	6.2–7.0
Exports to non-Socialist countries	5.9		
Imports from non-Socialist countries	.3		

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[1] 18th plenary session of the Central committee of the Communist Party of Czechoslovakia, Rudé Právo, 9.10.1980.

[2] Main guidelines of the 5-year plan, supplement of Rudé Právo, February 1981.

[3] Law Nr. 122/1891, Official Gazette, December 1981.

[4] Implied, as no growth either for consumption or for accumulation is envisaged in the plan.

[5] The annual volume of investments is not to overstep a limit of Kcs 135–150 billion. In 1980 the investment volume at constant prices amounted to Kcs 150.2 billion.

[6] Turnover with Socialist countries at constant prices.

TABLE 10.—CZECHOSLOVAKIA: MAIN INDICATORS OF ECONOMIC DEVELOPMENT

[Average annual change in percent]

	1976–80	1980	1981	1982	1983	1984	1985 plan	1981–85 plan
National product:[1]								
Produced	3.6	2.9	−0.1	−0.2	2.4	3.2	3.2	2.0–2.6
Distributed	2.2	2.7	−3.4	−1.6	.7	2.1	2.3	....
Industry:								
Gross production	4.7	3.5	2.2	1.1	2.8	3.9	3.0	2.7–3.4
Persons employed	.7	0.6	.4	.5	.4	.6	....	....
Labour productivity	4.0	2.9	1.8	.6	2.4	3.3	....	2.3–3.0
Agriculture, gross production total	1.9	4.8	−2.5	4.4	4.2	3.6	−1.1	[2] 1.4–1.9
Crops	1.5	6.2	−5.3	13.8	2.8	4.2	−.4	....
Animal	2.1	3.9	−.5	−2.0	5.4	3.2	−1.7	....
Grain:								
Million tons	10.1	10.7	9.4	10.3	11.0	12.0	....	....
Percent	....	+16.6	−12.1	+9.6	6.8	8.8	....	....
Gross capital investment	3.5	1.4	−4.6	−2.3	.6	4.1	....	....
Living standard:								
Personal consumption	3.4	−.1	1.7	−2.3	2.1	2.0	2.2	....
Retail trade turnover:								
At current prices	3.8	2.0	2.3	2.9	3.1	3.1	4.1	....
At constant prices	1.7	−.3	1.5	−2.8	2.1	2.3	2.3	....
Consumer prices	2.1	2.9	.8	5.8	.9	.9	1.8	....
Cost of living	2.0	3.4	.9	4.7	1.1	1.0	....	....
Money incomes at current prices	4.1	4.0	2.6	4.3	3.1	2.6	3.8	....
Population increase	.7	.5	.1	.3	.3	.3	.3	....
Per capita money income:								
At current prices	3.4	3.5	2.5	4.0	2.7	2.3	3.5	....
At constant prices	1.2	.6	1.6	−1.6	1.6	1.3	1.7	....
Average nominal wage	2.7	2.2	1.5	2.3	1.9	1.7	1.8	....
Average real wage	.6	−.6	.6	−2.3	.8	.7	.0	....
Foreign trade:								
Exports	11.4	14.3	9.4	9.0	9.0	7.2	....	7.4
Imports	10.0	7.6	5.8	9.2	9.4	7.4	....	3.5
Trade with the West:								
Exports	13.5	24.9	−1.3	−1.4	.6	[3] 3.9	....	7.0
Imports	9.7	9.0	−3.8	−6.5	−3.4	[3] 3.0	....	....

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[1] Net material product (NMP), for 1984 and 1985 plan gross material product not comparable with previous years and with 5-year plan 1981–1985.

[2] Against preceding 5-year plan period, annual average.

[3] Non-Socialist countries.

Source: Statistická rocenka CSSR 1978–1984, Plan Fulfillment Report for 1984, Rudé Právo 28 January 1985, S. Potác, Stnl na rok 1985, Rudé Právo, 6 December 1984.

TABLE 11.—SHARE OF DEPRECIATIONS AND WITHDRAWALS OF OBSOLETE CAPITAL STOCK IN GROSS INVESTMENTS[1]

[In billions Kcs at constant 1977 prices and in percentages]

	1977	1978	1979	1980	1981	1982	1983
(A) Gross investments	89.6	93.9	97.5	99.9	97.7	95.7	96.3
(B) Depreciation and withdrawals of obsolete capital stock	41.9	45.2	48.3	51.7	56.1	58.2	67.6
(C) (B) in percent of (A)	46.8	48.1	49.5	51.8	57.4	60.8	64.0

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[1] So-called productive sectors only.

Source: Statistická rocenka CSSR 1983, pp. 136, 137, 212; 1984, pp. 127, 138, 214.

TABLE 12.—NATIONAL ACCOUNTS OF CZECHOSLOVAKIA ACCORDING TO THE NET CONCEPT

[In billions Kcs at constant 1977 prices]

	1980	1981	1982	1983 [1]	1984 [1]	1985 plan [1]
(1) Global output	1,175.6	1,179.2	1,190.2	1,225.1	1,264.2	1,288.9
(2) Material inputs [2]	722.2	726.3	736.3	706.2	787.2	789.5
(3) Net national product	453.4	452.9	453.9	464.9	477.0	490.4
(4) Exports—imports and material losses	14.2	28.7	36.4	44.4	49.3	54.4
(5) Net national product domestically distributed (3)–(4)	439.2	424.2	417.5	420.5	427.7	436.0
Of which:						
(6) Private consumption	234.2	238.2	232.7	237.7	242.4	247.0
(7) Public material consumption	95.8	100.5	102.3	106.3	109.4	113.0
(8) Net accumulation [3]	109.2	85.5	82.5	76.5	76.0	76.0

[1] Provisional, plan targets for 1985 partly estimated on the basis of S. Potác, op. cit.

[2] Including depreciations and withdrawals of obsolete capital stock in the productive sectors.

[3] Increase in volume of fixed capital assets, changes in volume of incompleted fixed investments and of stocks.

Note.—So called nonproductive sectors excluded.

Source: For 1980 to 1983: Statistická rocenka CSSR 1984, pp. 126–138. For 1984: Plan Fulfillment Report of the Federal Statistical Office, Rudé Právo, 28 January 1985. For 1985: Report on the State Plan of Economic and Social Development for 1985 by S. Potác (Chairman of Planning Commission), Rudé Právo, 6 December 1984 and own estimates.

TABLE 13.—NATIONAL ACCOUNTS OF CZECHOSLOVAKIA ACCORDING TO THE GROSS CONCEPT

[In billions Kcs at constant 1977 prices]

	1980	1981	1982	1983 [1]	1984 [1]	1985 plan [2]
(1) Global output	1,175.6	1,179.2	1,190.2	1,225.1	1,264.2	1,288.9
(2) Material inputs [3]	670.5	670.2	678.2	698.6	720.9	728.2
(3) Gross national product [4] (1)–(2)	505.1	509.0	512.0	526.5	543.3	560.7
(4) Exports—imports and losses in stocks	12.8	27.0	34.9	42.9	49.5	55.6
(5) Gross national product domestically distributed (3)–(4)	492.3	482.0	477.2	483.6	493.8	505.1
Of which:						
(6) Private consumption [5]	231.8	235.7	230.1	235.1	239.8	245.1
(7) Public consumption [5]	78.4	82.1	82.6	85.7	88.0	91.0
(8) Gross accumulation [6]	182.1	164.2	164.5	162.8	166.0	169.0

[1] Provisional.

[2] Plan targets, according to S. Potac, op. cit., and own estimates.

[3] Without depreciation and withdrawals of obsolete capital stock in the productive sector.

[4] Including depreciations and withdrawals of obsolete capital stock in productive sectors.

[5] Without depreciation and withdrawal of obsolete capital stock in nonproductive sectors.

[6] =Net accumulation (see table 12), depreciation and withdrawals of total obsolete capital stock, and investment losses=total gross fixed capital investments, withdrawals of obsolete capital stock, changes in stocks and material losses (in investments and stocks).

Note.—So-called nonproductive sectors excluded.

Source: See table 12.

TABLE 14.—NATIONAL ACCOUNTS OF CZECHOSLOVAKIA ACCORDING TO NET AND GROSS CONCEPT

[Annual rates of change in percent] [1]

	1978	1979	1980	1981	1982	1983 [2]	1984 [2]	1985 plan [3]
Global output	4.5	2.7	2.9	0.3	0.9	2.9	3.2	2.0
Material inputs:								
Net	4.7	2.5	2.9	.6	1.4	3.2	3.5	1.4
Gross	4.5	2.2	2.7	−.1	1.2	3.0	3.2	1.0
National product:								
Net	4.1	3.1	2.9	−.1	.2	2.4	2.6	2.8
Gross	4.5	3.4	3.3	.8	.7	2.8	3.2	3.2

TABLE 14.—NATIONAL ACCOUNTS OF CZECHOSLOVAKIA ACCORDING TO NET AND GROSS CONCEPT—Continued

[Annual rates of change in percent] [1]

	1978	1979	1980	1981	1982	1983 [2]	1984 [2]	1985 plan [3]
National product domestically distributed:								
Net	2.7	1.1	2.7	−3.4	−1.6	.7	1.7	1.9
Gross	3.2	1.5	3.1	−2.1	−1.0	1.0	2.1	2.3
Private consumption:								
Net	3.6	−.6	−.1	1.7	−2.3	2.1	2.0	1.9
Gross	3.5	−.6	−.2	1.7	−2.3	2.2	2.0	2.2
Public consumption:								
Net	4.3	4.8	3.7	4.9	1.8	3.8	2.9	3.3
Gross	3.3	4.5	3.4	4.8	.6	3.7	2.7	3.4
Accumulation:								
Net	−.5	1.8	8.2	−21.7	−3.5	−7.3	−.7	0
Gross	2.8	3.3	7.5	−9.9	.2	−1.0	2.0	1.8

[1] Calculated according to constant 1977 prices.

[2] Provisional.

[3] Plan targets according to S. Potác, op.cit., and own estimates.

Notes.—As to differences between net and gross concept see text and tables Nos. 12 and 13.

Source: See table 12.

TABLE 15.—COMPARISON OF IMPLIED NMP PRICE DEFLATORS AND OF WHOLESALE AND RETAIL PRICE CHANGES, 1979–1983

	1979	1980	1981	1982	1983
(1) NMP produced at constant 1.1.1977 prices: Implied annual price deflator in percent	2.0	2.6	−2.6	4.6	−0.1
(2) NMP domestically distributed at constant 1.1.1977 prices: Implied annual price deflator in percent	2.8	2.3	−1.0	5.6	1.6
(3) Index of wholesale prices: (1.1.1977 = 100) annual change in percent	.4	1.8	4.8	7.6	−.3
(4) Index of retail prices: (1.1.1977 = 100) annual change in percent	3.9	2.9	.8	5.8	0.9
(5) Composite weighted price index [1] of (3) and (4), annual change in percent	2.4	2.4	2.6	6.6	+.2

[1] Weighted with share of private consumption in NMP distributed.

Source: Statistická rocenka CSSR 1984, pp. 123, 127, 129, 262, 268, 510, 511.

TABLE 16.—LEVEL OF SELECTED ECONOMIC INDICATORS IN 1981–1985 COMPARED TO 1980 OR EARLIER HIGHER LEVEL [1]

[Index (1980 or earlier higher level = 100)]

	1981	1982	1983	1984	1985 plan
NMP produced (1980 = 100)	99.9	100.1	102.5	105.2	108.1
NMP domestically distributed (1980 = 100)	96.5	95.1	95.8	97.4	99.2
Private consumption (1978 = 100)	101.0	98.7	100.8	102.8	104.8
Gross capital investment (1980 = 100)	95.5	93.2	93.7	97.5	101.9
Retail trade turnover (1978 = 100)	101.0	98.2	100.4	102.5	104.8
New apartment built (1978 = 100)	73.8	78.7	74.0	70.3	82.7
Average real wage (1978 = 100)	98.9	96.6	97.4	98.1	99.0
Per capita consumption of meat (1980 = 100)	101.2	92.9	97.8	98.2	99.0

[1] At constant prices or in physical units.

Source: See table 12 and statistická rocenka CSSR 1984, pp. 25, 39, 213, 226, 510.

TABLE 17.—DEVELOPMENT OF QUALITATIVE GROWTH FACTORS OF NATIONAL PRODUCT, 1981–1984 [1]

[Index (1980 = 100)]

	1981	1982	1983	1984
1. Output per person employed	99.6	99.8	101.7	103.8
2. Output per unit of fixed capital stock	94.4	89.3	87.5	84.8
3. Total factor productivity [2]	98.0	96.7	97.4	98.1
4. Material inputs per unit of NMP	100.7	101.8	102.6	102.9
5. Primary energy consumption in terajoules per unit of NMP	99.2	98.0	97.0	95.0

[1] Calculated according to constant 1977 prices.

[2] Assuming capital elasticity $\alpha = 0.3$, and labour elasticity $1-\alpha$).

Source: Statistická rocenka CSSR 1984, pp. 128 and for 1984 Plan Fulfillment Report, partly estimated.

AGRICULTURAL PERFORMANCE AND PROSPECTS IN CZECHOSLOVAKIA THROUGH THE EIGHTIES

By Robert Cummings*

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I. INTRODUCTION AND SUMMARY

INTRODUCTION

Czechoslovakia, like the rest of Eastern Europe, was considered a growing market for agricultural imports as recently as 2-to-3 years ago. The country traditionally enjoys one of the most prosperous economies in the region and the relatively small agricultural sector meant that substantial farm imports, particularly of livestock feed, were essential to preserve the standard of living.

However, recent economic and political events in the region and the Czechoslovak responses have seriously darkened the market outlook in the country. This study is a reassessment of agricultural prospects in Czechoslovakia in light of recent political turmoil in Poland, foreign credit problems in all countries, and major disappointments in the performance of the domestic economy.

The Five Year Plan (FYP) for the Czechoslovak economy covering 1981–1985 reflects the Government's response to these problems. Analysis of the agricultural portion of the plan provides insights into the prospects for U.S. agricultural trade with Czechoslovakia. Since it is likely that officials will still be confronting later in the eighties many of the same problems they faced in drawing up the 1981–85 plan, and that the conservative nature of the lead-

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ership will remain, the major agricultural policies of the 1981–85 FYP should continue through the end of the eighties.

Based on this assumption and historical performance, projections covering production, domestic utilization, and trade were made for the major commodities of interest to Western officials and businessmen: grain, oilseeds, potatoes, sugar beets, meat, milk, and eggs. In making these projections the author relied heavily on statistical information contained in the Czechoslovak statistical yearbook, translations of relevant Czechoslovak economic and political journals, and publications of the U.S. Department of Agriculture, especially "Eastern Europe: Agricultural Production and Trade Prospects Through 1990" (34).** This report contains the projections used here plus the projection methodology. Interested readers are referred to this report for an East European-wide discussion of agricultural prospects.

SUMMARY

Economic growth prospects in Czechoslovakia for the remainder of the eighties are for continued disappointing performance. This poor performance, the pessimistic expectations of planners illustrated in the 1981–85 targets, and the conservative nature of the Czechoslovak leadership should all work against any significant improvement in the economy for several years.

Agriculture is being called on to supply more of the country's food requirements while imports are to be cut. This has meant several changes in agricultural policy. The farm consolidation campaign of the late seventies has been shelved and replaced by policies to spur production and efficiency on farms without changing their present structure. This has resulted in some tentative reform of central planning in agriculture, new support for private agriculture, de-emphasis of livestock production and a halt to the steadily rising per capita consumption of livestock products which the country enjoyed through the seventies.

Czechoslovakia entered the eighties following five years of generally disappointing overall agricultural production. Very poor crop production accounted for the subplan performance. Average 1976–80 grain output, for example, was 10.1 million tons, only 8 percent above average 1971–75 output and the production rise was just below one-half of the planned increase. Of the major crops, only oilseed (rapeseed, sunflowerseed, and soybean) output met the expectations of planners.

Despite the crop shortfall, the livestock sector performed well. Average meat production rose 13 percent between 1971–75 and 1976–80 and milk and egg production also grew. Livestock's success was based on higher grain and protein inputs: by 1976–80, average grain imports were 1.68 million tons, up from an average 1.56 million in 1971–75. Average oilseed meal imports increased even more, rising to 643,000 tons in 1976–80, 21 percent higher than in 1971–75. Oilseed imports remained unchanged at an average annual 135,000 tons in 1971–75 and 1976–80.

**Numbers in parentheses refer to sources at the end of this report.

These higher imports became untenable to officials, however, when the debt repayment problems of Poland and Romania drastically reduced credit availability for the entire region and highlighted the area's economic and financial problems. Czechoslovak officials were forced to plan extremely slow economic growth through 1985 and cut imports as a result. There is to be no increase in investment, exports are to be up significantly, imports reduced, and crop production is to grow much more than livestock output (11 percent vs 2 percent). Any increases in crop and livestock production will have to result from more efficient use of existing inputs as little increase in machinery and chemical use is expected.

The production and trade projections for 1990 reflect these economic problems and constraints. Grain production is forecast at 11.6 million tons, 15 percent above average 1976-80 output but meat production, at 1.4 million tons, should be unchanged from the 1976-80 average. The meat forecast combined with higher forecasted grain production should reduce grain imports to some 945,000 tons in 1990/91, 44 percent lower than the 1976-80 average.

Total oilseed and oilseed meal imports, in soybean meal equivalent, could actually increase, however. Imports are forecast at 878,000 tons in 1990/91, 22 percent higher than average 1976-80 imports.

II. Planning and Policy

Economic growth prospects in Czechoslovakia for the remainder of the eighties are for continued disappointing performance similar to that of the early eighties (Table 1). Performance in 1981 and 1982 (the first two years of the 7th Five Year Plan) was generally well below plan targets, casting doubt on overall fulfillment of the 1981-85 plan. Poor performance and the pessimistic expectations of planners illustrated in the 1981-85 targets should work against any significant improvement in the economy for the remainder of the decade (Table 2).

TABLE 1.—PRINCIPAL PLAN INDICATORS AND PERFORMANCE, 1981-85 ANNUAL

[Percent change from previous period]

Indicator	1981		1982		1983 plan	1983-85 plan [1]
	Plan	Actual	Plan	Actual		
National income	2.7	0.2	0.5	0.4	2.0	2.7
Industrial production	2.4	2.0	0.8	1.0	2.4	3.4
Agricultural production	2.6	−3.4	3.2	1.1	2.7	1.3
Investment	−3.5	−2.0	−2.5	−1.1	−1.4	−4.0

[1] Annual percent change in 1983-85 versus performance in 1981-82.

Sources: (12, 15, 32, 33).

TABLE 2.—PRINCIPAL PLAN INDICATORS AND PERFORMANCE 1976-80 AND 1981-85

[Percent increase from previous period]

Indicator	1976-80 plan	1976-80 actual	1981-85 plan [1]
National income	27	20	10-14
Industrial production	33	25	14-18
Agricultural production	14	9	5.2

TABLE 2.—PRINCIPAL PLAN INDICATORS AND PERFORMANCE 1976–80 AND 1981–85—Continued

[Percent increase from previous period]

Indicator	1976–80 plan	1976–80 actual	1981–85 plan [1]
Food industry production	20–21	[2] 20	6.5
Investment	37	30	0

[1] Targets as of June 1982, revised down from earlier levels.
[2] Estimate.

Sources: (20, 24, 25, 31).

The economic problems now familiar to Eastern Europe underlie these prospects. Like most countries of the region, Czechoslovakia imports the bulk of its energy and raw material needs. These imports contributed significantly to Czechoslovakia's trade deficits in the seventies and disappointing industrial and agricultural production limited the availability of new investment funds. Also, the conservative political outlook of officials has prevented successful changes in economic management. As a result, Czechoslovak planners had little choice but to scale back economic growth targets. However, data contained in tables 1 and 2 indicate that even the present aggregate targets for 1981–85 are too optimistic. Total investment, for example, will fall in the 7th FYP rather than remain constant as the plan stipulates. Growth of national income and industrial production should just approach the low end of the plan targets but agricultural production could fall well short of the mark.

A. Agricultural Policy

The primary goal of Czechoslovak agriculture remains the achievement of self-sufficiency in most agricultural products. However, the expectation of little growth in agricultural investment and inputs has led to a revamping of agricultural policy. Emphasis is now on pragmatic policies which will increase output at the least cost: relaxation of a farm consolidation campaign, elimination of excessive plan indicators, solving farm management problems, and a positive reassessment of private production.

In the 5th and 6th Five Year Plans (1971–80), the Government hoped that large-scale, specialized agro-industrial enterprises combining farms and processing industries would lead to higher output. Starting in the midseventies, collective and state farms were consolidated to form these new enterprises which had a priority claim on investment. However, problems late in the 6th FYP led to a halt in consolidation efforts. The hoped for increases in output did not occur and serious management problems developed (30).

Officials also cite an excessive number of plan indicators as an underlying factor explaining the disappointing performance of Czechoslovak agriculture (25). While the number of plan indicators has been extremely low on the federal level—4 mandatory and 31 orientation (non-binding) indicators—regional and local administrators have frequently added more. There were reports of some agricultural enterprises having more than 90 plan fulfillment indicators (25).

In January 1982, officials introduced the "New System of Planned Management of the National Economy" into the agricultural sector. This new policy's major influence in agriculture should be a lessening of central control over day-to-day farm administration and wider management initiative for farm officials (10). There are now only 2 binding plan targets imposed from the federal level—for the procurement of grain and of slaughter animals. Local officials may add up to only 3 supplemental targets (21).

B. Private Production

Czechoslovak authorities, like their counterparts in most other East European countries plus the USSR, have "rediscovered" the economic value of private farming. Czechoslovak planners have seized on private undertakings as an important component of current agricultural policy, although the size of full-time private agriculture is very small. Private farmers accounted for less than 2 percent of the agricultural labor force in 1980, down from 6 percent of 1975. These individuals live mainly in hilly regions where large-scale agriculture is impractical. By law, they are restricted to owning only up to 1 hectare of land but are allowed access to certain state-owned lands for grazing.

Part-time private production is considerably more extensive and, economically, more important than its full-time counterpart. Every collective farm member and state farm employee is entitled to a private plot. In addition, many urban dwellers also farm plots in the suburbs. This part-time private production is an important source of food: private production accounts for approximately 40 percent and 70 percent, respectively, of total vegetable and fruit production and roughly one-quarter of meat production.

For planners, the benefits of private production are threefold. First, because of its small-scale nature this sector can most efficiently utilize much of the agricultural land unsuited for large-scale mechanized use which has steadily fallen out of use. (19) This land is located primarily in hilly and mountainous regions.

Secondly, the past de-emphasis of private production led to local food production shortfalls, especially of livestock products. (19) This lack of "rural self-sufficiency" placed unwanted demands on state stocks, the livestock portion of which was produced in part with imported feed. Increased private livestock-product output for the rural market based on local feed supplies is an important policy goal.

Finally, expansion of the private sector is a relatively inexpensive policy promising increased output in a timely fashion. While the Government will find it necessary to increase production of small scale tools and implements plus increase deliveries to private producers of fertilizers, plant protection agents and livestock feed, the costs involved are likely less than those needed to raise the marginal output in the socialist sector.

Contract fattening of livestock by an individual for delivery to a state organization (collective or state farm or food processing enterprise) is the most visible aspect of the more positive attitude toward private agriculture. However, meat produced under contract currently represents less than 1 percent of total production. Plan discussions call for a 150 percent increase in meat production under contract by 1985. If achieved, this target would still leave contract livestock fattening a minor supplier for the nation.

The Government in early 1982 abolished all taxes on revenue from the sale of food produced privately by citizens on a part-time basis. Although full-time farmers are excluded from this tax benefit, it should be a considerable incentive to part-time producers. Also, small scale producers have been eligible since March 1982 to receive loans to cover expenses connected with plant and livestock production. If the producer is a member of one of the several small grower associations, the interest rate is substantially below that charged the population at large (12).

Although Czechoslovak authorities have begun to tone down their longstanding opposition to private agriculture, their current policy is tactical only and does not signify a fundamental change. The preeminence of large-scale socialized agriculture will continue with private agriculture called on to help augment supplies in specific areas only (19).

In addition, expansion of private production is also facing opposition from state and collective farm officials fearful of new competitors. Promises of access to state and collective farm grazing areas and guaranteed sales of livestock feed challenge the privileged positions of these farms and the implied assumption that private producers are more efficient feeders is embarassing to large-scale producers. If this opposition cannot be managed, hoped for results from private production will not be forthcoming.

III. AGRICULTURAL PRODUCTION

Gross output targets for agricultural production are available only through 1985. The 1981–85 plan calls for an increase in agricultural production of 5.2 percent over 1976–80 output, substantially below performance in the 6th FYP. In a major effort to reduce grain and other feed imports, crop production, particularly of forage crops, is planned to increase much faster (10.8 percent) than livestock production (2 percent). Self-sufficiency in livestock feed production will remain the main goal of Czechoslovak agriculture through 1990.

A. Crop Production in the 6th FYP

Czechoslovakia entered the eighties following five years of disappointing agricultural performance. The 9 percent increase in agricultural output in 1976–80 was well below the planned 14 percent. Very unfavorable weather in some years and insufficient inputs were primarily responsible.

The crop shortfalls of 1976–80 were made worse by a high degree of processing and storage waste. Although exact data are rare, approximately 10–30 percent of various crops are lost to harvesting, processing and/or storage waste. Almost exclusive emphasis on rising gross crop output has resulted in neglect of adequate harvesting technology and storage capacity (1).

Grain and Forage.—Average 1976–80 grain production increased only 8 percent from the 1971–75 average—almost one-half the planned increase (Table 3). The shortfall in production is attributed to below-plan yields with the planned 4.1–4.2-tons per hectare for all grain met only in 1980. Forage production in the 6th FYP was probably disappointing, although few targets are available. Average production of feed roots in 1976–80 was 58 percent less than in 1971–75, average hay output was unchanged and corn silage production was 29 percent higher.

TABLE 3.—PERCENT CHANGES IN CROP OUTPUT AND AREA, 1976–80 VERSUS 1971–75

[In percent]

Crop	Change in output 1976–80/1971–75	Change in area 1976–80/1971–75
Grain	7.6	−1.5
Wheat	13.5	2.5
Coarse grain	2.4	−4.6
Corn silage	29.2	+12.9
Hay	INS	−10.8
Potatoes	−19.5	−25.2
Oilseeds [1]	46.6	46.7
Sugar beets	2.4	9.6
Vegetables	−6.5	NA
Fruits	−3.0	NA
Feed roots	−57.5	−53.3

[1] Soybean, rapeseed and sunflower seed.

INS=Insignificant, NA=Not available.

Source: (28).

Oilseeds, Sugarbeets, and Potatoes.—Of the other major crops only oilseed production (rapeseed, sunflower seed and soybean) met the expectations of planners. Average oilseed production expanded 47 percent in the 6th FYP. Production in 1980, at 245,000 tons, was above the plan target of 240,000 tons (Table 4). The increase in oilseed output is attributable to higher harvested areas for rapeseed and sunflower seed. The average area for rapeseed increased one third in the 6th FYP to 72,200 hectares and accounted for 82 percent of average oilseed area (Table 5).

Sugar beet production fell substantially below plan. Area harvested, yield, and sugar content were all below plan targets. For the 1980 crop, the yield was 33.3 tons of beets per hectare, versus the planned figure of 40–41.5 tons per hectare. Despite an area increase of 9.6 percent, total production in 1976–80 was only 2.4 percent above that of 1971–75. Sugar content remained constant at 10–11 percent. Poor weather and less-than-planned area were responsible for this poor performance. Potato outturn in the 6th FYP was disastrous. Total output fell 19.5 percent due to very adverse weather, especially in 1980, a 25 percent decline in sown area, and inadequate supplies of plant protection agents.

B. Crop Production Prospects

The major guidelines of the 7th FYP—increased crop production relative to that of livestock and expansion of domestic feed supplies—should influence crop production well past 1985. The major goal of Czechoslovak agriculture is to achieve self sufficiency in all but high-protein livestock feed supplies by 1990 and this has resulted in increased emphasis on expanded forage and grain production.

TABLE 4.—PRODUCTION OF SELECTED CROPS, 1976–80 AVERAGE AND 1980–82 ANNUAL [1]

[Thousands of tons]

Item	1976–80 average	1980	1981	1982
Grain	10,060	10,699	9,400	10,225
Wheat	4,949	5,386	4,325	4,600
Rye	578	570	544	545
Barley	3,386	3,575	3,392	3,650
Oats	423	423	433	490
Corn	724	745	706	940
Potatoes	3,678	2,695	3,743	3,500
Sugar beets	7,132	7,255	6,969	8,210
Sunflowerseed	17	25	33	35
Rapeseed	151	214	200	180
Soybeans	4	6	6	6
Corn silage	14,390	14,647	15,642	NA
Hay [2]	6,179	7,169	6,635	NA
Feed roots	870	715	795	NA

[1] 1982 data are preliminary and unavailable for corn silage, hay, and feed roots.
[2] Does not include meadow hay.

NA = Not available.

Source: (28).

TABLE 5.—AREA OF SELECTED CROPS, 1976–80 AVERAGE AND 1980–82 ANNUAL [1]

[Thousands of hectares]

Item	1976–80 average	1980	1981	1982
Grain	2,699	2,628	2,595	2,565
Wheat	1,229	1,197	1,090	1,070
Rye	186	179	171	170
Barley	919	921	996	970
Oats	162	139	160	170
Corn	202	192	178	185
Potatoes	223	199	200	200
Sugarbeets	217	218	219	215
Sunflowerseed	13	20	19	22
Rapeseed	72	91	95	80
Soybeans	3	1	2	3
Corn silage	439	436	423	NA
Hay	957	998	1,010	NA
Feed roots	21	20	17	NA

[1] 1982 data are preliminary and unavailable for corn silage, hay and feed roots.
[2] Does not include meadow hay.

NA = Not available.

Source: (28).

Forages.—Although the plan for agriculture as a whole is modest, the forage (hay, corn for silage, and feed roots) portion of the plan is quite ambitious. The high cost of imported grain, the generally poor performance of the Czechoslovak economy and the lower cost of forage feeding relative to grain have made domestically produced forage an increasingly attractive feed. The production of forages is to increase approximately one-third in the 7th FYP over 1976–80 production. Plans call for area under forage crops (excluding meadows) to expand by 150,000 hectares (about 10 percent) by 1985 (24). Also, approximately 280,000 hectares of meadows will be drained and re-sown with perennial grasses (5). Throughout the seventies, forage production suffered at the hands of official apathy. Area fell in every year except 1979 and 1980 and there was little yield stability.

It is unlikely that the 7th FYP will be met for forage production (5). Some expansion in area, particularly of corn silage and hay, is likely but the lack of new agricultural land in Czechoslovakia and a reluctance to shift large acreage out of grain indicate no significant forage area growth. Also, investment constraints should hamper the use of yield improving fertilizers, plant protection agents and machinery.

Because of uncertainty over the degree of actual support for expanded forage production and input availability, and because of the erratic historical yield of the major forages, no output projections for these crops were made.

Grain.—The plan is relatively silent on grain for 1981–85. Production in 1990 is projected at 11.6 million tons (Table 6). This forecast is based on the following factors: diminished grain area, lower yield improvements than in the past, and diminished marginal returns from increased fertilizer use. Grain area is projected to decline to 2.6 million hectares by 1990, four percent below average 1976–80 area.

A major constraint on achieving higher yields is the declining marginal returns from increased fertilizer application. Czechoslovakia has reached high levels of fertilizer application (344 kilograms/hectare of arable land in 1981). Any further increase in use should not significantly increase grain yields. Higher yielding seeds, more extensive use of plant protection agents and reductions in harvest losses will grow in importance as yield determinants. Given the long lead time necessary to develop seed hybrids and the current constraints on investment and energy use, any expected yield improvements from these inputs are not expected until the late eighties.

Oilseeds.—Oilseed production should continue a healthy growth rate for the rest of the decade, although below the 50 percent increased achieved in 1976–80. Total oilseed area is relatively small (an average 88,000 hectares in 1976–80) but has risen consistently since the mid-seventies. This increase is expected to continue, with production of rapeseed in 1990 forecast at 280,000 tons from an area of 115,000 hectares. Because of the traditionally small area and production of soybeans and sunflowerseed, output of these crops was not forecast.

Potatoes.—Potato area is expected to fall to 170,000 hectares by 1990, 24 percent below average 1976–80 area. Yields should increase, however, as production is forecast at 3.1 million tons, 14 percent below the 1976–80 average. Declining potato area and production forecasts continue the trend of past years.

Potatoes are not a significant livestock feed in Czechoslovakia and per capita human consumption has fallen steadily, although slowly, as the country's standard of living has risen. The relative labor intensity of potato production, the lack of adequate harvesting machinery, and insufficient post-harvest storage space, have caused planners to shift sown area out of potatoes into other crops, particularly grains, oilseeds and forages (7). In order to reduce losses, which are particularly high for this crop, three or four large potato processing plants (for starch extraction and other commercial products) are to be built by 1991.

Sugar beets.—The emphasis in future sugar beet cultivation will be on improved harvesting technology to reduce losses and on improved sugar beet seed development, particularly of monogerm varieties, to produce a crop more easily harvested by machine (7). Sugar beet harvesting is fully mechanized but an inadequate supply of harvesters results in early digging, reduced sugar content, and a loss of up to 20 percent of all beets. Sugar beet area will be approximately 213,000 hectares by 1990, only slightly below current area with improved yields leading to forecasted production of 8 million tons, well above output for all but two years between 1976 and 1982.

TABLE 6.—SELECTED CROP AREA, YIELD, AND OUTPUT PROJECTIONS, 1990

	Area (1,000 ha.)	Yield (ton/ha.)	Production (thousands of tons)
Grain	2,600	4.47	11,610
Rapeseed	115	2.43	280
Sugar beets	215	37.00	7,955
Potatoes	170	18.50	3,145

Source: (34).

Livestock Production in the 6th FYP

The livestock sector in Czechoslovakia performed well in the 6th FYP, fulfilling the planned output target. The value of livestock output, in constant prices, was 11.6 percent higher in 1980 than in 1975. The production of eggs, poultry for slaughter, and hogs for slaughter was above plan while the plan for milk production, and cattle numbers was not met (Tables 7 and 8). Despite rising grain and protein feed imports, the country failed to supply proper rations of balanced livestock feed to the cattle sector.

Livestock numbers and production.—The poultry sector grew most in 1976–80 with average poultry numbers and meat output 14 and 29 percent higher, respectively, in 1976–80 than in 1971–75. Egg production increased 10 percent. The total number of hogs was up 19 percent and, by 1980, the population was approximately 1.2 million head more than provided for in the plan. The plan was also overfulfilled for slaughter hogs, indicating that the average 803,000-tons of pork produced in 1976–80 was likely above plan expectations.

Plan fulfillment commentary continuously cited poor performance in the cattle sector. Cattle numbers were up only 7 percent in 1976–80 and cow numbers actually fell slightly. Beef and veal production was virtually unchanged. Milk output was also disappointing. While it increased 6 percent in the 6th FYP, it was still short of planned production.

TABLE 7.—JANUARY 1 LIVESTOCK NUMBERS, 1971–75 AND 1976–80 AVERAGES

[Thousand head]

	1971–75 average	1976–80 average
Total cattle	4,445	4,754
Cows	1,908	1,902
Hogs	6,109	7,240
Sheep	891	837
Poultry	39,461	44,871

Source: (28).

TABLE 8.—OUTPUT OF SELECTED LIVESTOCK PRODUCTS, 1971–75 AND 1976–80 AVERAGES

[Thousands of tons]

	1971–75 average	1976–80 average
Total meat[1]	1,256	1,423
Beef and veal	403	424
Mutton, lamb, goat	8	6
Pork	683	803
Poultry	123	159
Milk	5,288	5,629
Eggs[2]	4,272	4,690

[1] Carcass weight.
[2] Millions.

Source: (28).

Feeding efficiency.—Despite the overall favorable livestock performance, Czechoslovakia suffers from serious feedings efficiency problems. These problems are most severe in cattle production where they contributed significantly to 1976–80's poor performance.

The average slaughterweight of cattle and calves dropped steadily, with few exceptions, through the 6th FYP (Table 9). By 1980, cattle slaughterweight was 4 percent less than the 1975 level and that of calves was just over 13 percent lower. Average daily weight gains for feed cattle also fell despite increased consumption of feed per kilogram of meat produced (Table 10). The drop-off in slaughterweights meant that larger numbers of animals had to be slaughtered to maintain beef production. Extensive reliance on roughage feeding, poor nutritional content of silage, and insufficient high-protein feed concentrates are the main reasons for poor performance in the cattle sector (13).

Productivity in hog production was mixed, with average slaughterweight increasing 11 percent between 1975 and 1980, although there was no improvement in average daily weight gain. The situation has worsened, however, over the past 3 years. Slaughter weights fell almost 3 percent between 1980 and 1982 as tight feed supplies reduced the consumption of mixed feed per kilogram of pork produced. Milk and egg yields also improved in the 6th FYP but, as with hog production, yield increases have slowed recently and, for eggs, even declined slightly.

TABLE 9.—LIVESTOCK PRODUCTIVITY INDICATORS, 1975, 1976–80 AVERAGE, AND 1980–82 ANNUAL

Indicator	Unit of measure	1975	1976–80 average	1980	1981	1982
Liveweight:						
Slaughter cattle	Kilograms	492.6	474.6	472.9	462.4	449.1
Slaughter calves	Kilograms	100.6	89.9	87.1	69.9	56.3
Slaughter hogs	Kilograms	102.3	108.2	113.9	109.9	110.4
Daily weight gain:						
Feed hogs	Kilograms	51	NA	.52	.50	.49
Feed cattle	Kilograms	.76	.70	.72	.68	.64
Milk yield per cow	Liters	2,803.0	2,934.5	3,089.0	3,091.6	3,102.5
Eggs per hen	Units	218.3	224.6	228.3	229.8	227.6

NA = Not available.

Source: (13, 14, 22, 28).

TABLE 10.—CONSUMPTION OF FEED, IN STARCH UNITS, PER UNIT OF OUTPUT OF SELECTED LIVESTOCK PRODUCTS IN THE SOCIALIZED SECTOR, 1977–82

	1977	1978	1979	1980	1981	1982
1 liter of milk	.87	.88	.86	.84	.82	.79
1 kilogram of slaughter cattle	5.24	6.50	6.48	6.45	6.59	6.56
1 kilogram of slaughter hog	2.58	2.58	2.58	2.50	2.46	2.45
1 egg	.11	.11	.11	.11	.11	.11

Source: (28).

D. Livestock Prospects

Livestock production for the remainder of the eighties will follow the path of the recent past: reduced meat production, particularly of port, rising milk and egg output and expansion of the cattle and sheep sectors at the expense of hogs and poultry.

Cattle and, to a much lesser extent, sheep are the main growth segments of the livestock sector. Beef production is planned to increase 10 percent from the 1980 level by 1985 with milk production up 6 percent (2). Pork production is to remain constant however, near the reduced 1982 level of 785,000 tons. Officials are well on their way toward restricting growth in the hog sector. By January 1, 1983 hog numbers had fallen 10 percent below the 1981 level, and 1982 pork production was 12 percent below 1981 output.

This reduction is a major change in policy for Czechoslovak agriculture. While hog numbers and pork output have fallen recently in other East European countries, most notably in Poland and Romania, these declines were unintended and resulted from reduced financing for feed imports. Czechoslovakia remains the only country in Eastern Europe choosing reduced meat production and consumption over continued levels of food imports.

Livestock products.—Because of this policy, 1991 pork production is projected at 750,000 tons, 12 percent below 1980 output (Table 11).[1] Despite the emphasis on cattle, beef output is estimated at 470,000 tons in 1991, only 8 percent above 1980 production. The longer development period for cattle and emphasis on raising slaughter cattle weights and feeding efficiency rather than increasing the number of animals will limit output growth. Poultry meat production is forecast at 180,000 tons, 5 percent over 1980 output. As with hogs, poultry output will be restrained because of its dependence on high-protein mixed feeds. Despite a rapid increase in sheep numbers in recent years—approximately 990,000 head on January 1, 1983 versus 875,000 in 1980—production of mutton and lamb should not increase beyond 10,000 tons.

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[1] Projections of livestock production are lagged 1 year from the 1990 crop projections because livestock output is affected most by the crop harvest of the preceding year.

Total meat production by 1991 is forecast at 1.4 million tons, 4 percent below 1980 output. The declining trend projected for meat output is in line with plans for per capita meat consumption which calls for little change from the 80 kilograms consumed in 1982. Per capita meat consumption peaked at 86.6 kilograms in 1981.

In contrast to meat production, milk and egg production should increase as a partial substitute for the protein lost because of lower meat consumption. Egg production is forecast at 5.9 billion pieces in 1991, 20 percent above 1980 output and milk output could be 6.6 million tons or 11 percent higher in 1991 than in 1980.

TABLE 11.—OUTPUT OF SELECTED LIVESTOCK PRODUCTS, 1980–82 ACTUAL, AND 1991 PROJECTED

[Thousands of tons]

	1980	1981	1982	1991	Percent change 1991/1980
Meat, carcass weight	1,499	1,527	1,425	1,440	−3.9
Pork	851	889	785	750	−11.9
Beef	436	423	430	470	7.8
Poultry	172	170	165	180	4.7
Other meat	40	45	45	40	0
Cow's milk	5,909	5,918	5,900	6,580	11.4
Eggs (millions)	4,900	4,968	5,030	5,900	20.4

Sources: (28, 34).

IV. Resource Use

There will be little overall increase in the use of resources in agriculture—investment, machinery, chemicals, irrigation and drainage, and land and labor—for the rest of the eighties. This presents serious problems for Czechoslovak agriculture because the higher planned crop output will have to result almost entirely from more efficient use of a relatively stable supply of resources.

Investment.—The growth of agricultural investment (new buildings and equipment, excluding the food processing industry) has been almost zero since the mid-seventies. The value of agricultural investment increased less than one percent (in constant prices) in 1976–80, while total investment in the economy rose 21 percent. This trend did not continue, however, in 1981 when agricultural investment rose 6 percent (constant prices) while total investment fell 5 percent.

Despite the modest rise in 1981, farm investment is expected to follow the declining trend of total investment, at least through 1985. There should be little real increase in total investment through the mid-eighties.

Nevertheless, agricultural investment as a share of total investment should increase. This share dropped from 12 percent in 1976 to 10 percent in 1980. It is expected to regain the 12 percent mark by 1985, indicating a somewhat increased emphasis on agriculture (12). Even at 12 percent, this share is one of the lowest in Eastern Europe and reflects the highly industrialized character of the Czechoslovak economy.

Future agricultural investment will be directed at reducing harvesting, processing, and storage losses rather than at simply raising gross agricultural output. In line with the forage campaign, equipment for the plant sector is the priority claimant on agricultural investment funds. Development of more efficient forage harvesting machinery will be stressed along with special attention to draining meadows and pastures. Other preferential investment areas are fruit and vegetable production, particularly harvesting machinery, storage facilities for grain, potatoes, and fodder, and expanded repair shops and diagnostic centers for machinery (22).

Agricultural machinery.—Czechoslovakia has already attained a high level of agricultural mechanization and current policy is directed toward increased efficiency and expansion of use into remaining under-mechanized and labor-intensive areas. Machinery plans for the next several years include larger deliveries of sugar beet and other sowing machines and larger deliveries of plows (26). The total tractor supply (136,700 units in 1980) is planned to fall by approximately one-half by mid-decade as more fuel efficient trucks increase their share in agriculture transportation. Authorities hope to reduce the share of tractors in total agricultural transportation from the current 30 percent (in terms of ton kilometers) to 5 percent (8).

Although most current discussion of farm machinery policy is shaped in terms of the 1981–85 plan, today's goals and directives should still be in place by 1990. The no-growth investment policy is forcing increased efficiency from each unit of agricultural machinery rather than a simple increase in machinery numbers.

Agricultural chemicals.—Average fertilizer use increased 15 percent in the 6th FYP. By 1980, use reached 340 kilograms per hectare of arable land compared with 295 kilograms in 1975. Use increased to 344 kilograms per hectare in 1981. Czechoslovakia is second only to the German Democratic Republic (GDR) in fertilizer use in Eastern Europe and the country can expect little rise in marginal crop output from increased fertilizer application. Recent policy has emphasized more efficient application of fertilizers and a shift to liquid fertilizers which are easier to apply and insure more precise mixing than granular varieties. Although the share of liquid fertilizer in the total supply of nitrogen fertilizer increased 13 percent between 1975 and 1980, the supply of liquid fertilizers in 1982 was only 2–3 percent of the total fertilizer assortment. Expansion of liquid fertilizer production and use will continue in the eighties (11).

Fertilizer use should increase slightly throughout the eighties but the magnitude of change will be restricted by planned energy cutbacks throughout the economy, environmental concerns and decreasing marginal returns to higher application rates.

Irrigation and drainage.—Only 322,000 hectares, or 6 percent of arable land in Czechoslovakia is under irrigation, one of the lowest shares in Eastern Europe. Approximately two-thirds of irrigated area is in Slovakia. Drained area is much more extensive, covering approximately 1.3 million hectares in 1980 or 19 percent of all agricultural land.

Plans call for approximately 552,400 hectares of irrigated land and 1.6 million hectares of drained land by 1985 (29, 39). Almost all of the drained area will be of meadows in order to increase forage production. The target for expanded irrigated area is very optimistic—it is well above what was achieved in 1971–75 and 1976–80—and overall investment constraints will likely focus attention more on improved use of existing facilities.

Land and labor.—Land and labor are in short supply in Czechoslovakia and agriculture competes with every other sector of the economy for these resources. Total agricultural land area has fallen steadily since World War II as industry expanded and rising crop yields reduced the value of marginal producing areas. Agricultural land fell 2.2 percent between 1975 and 1980 while arable land area fell 1.7 percent (Table 12).

TABLE 12.—TOTAL AND AGRICULTURAL LAND SUPPLY, 1975, 1980–1982

[Thousands of hectares]

	1975	1980	1981	1982
Total land	12,789	12,789	12,789	12,789
Total agricultural land	7,004	6,851	6,843	6,840
Total arable land	5,257	5,169	5,171	5,171
Meadows	906	852	845	841
Pastures	841	830	827	828

Source: (28).

Users of agricultural land for industrial purposes have been required since 1976 to reclaim, at their own expense, unused land of a least the same size. This law has not been strictly enforced, however. The decline in the supply of farm land should slow through the remainder of the eighties because of strong official support for increased agricultural self sufficiency and the low expected growth rate for the economy.

As with land, the agricultural labor force has fallen since 1945. The lure of higher-paying industrial jobs served to transfer labor out of agriculture and labor was increasingly substituted with machinery. In 1980, the agricultural labor force (including employees of machine tractor stations) equalled 953,000, 7 percent less than in 1975. The share of agricultural labor in the total labor supply fell to 13 percent in 1980 from 15 percent in 1975 (Table 13).

TABLE 13.—TOTAL LABOR FORCE AND AGRICULTURAL LABOR FORCE BY SECTOR, 1970, 1975, AND 1980

[Thousands of Persons]

Indicator	1970	1975	1980
Total labor force	6,871	7,060	7,358
Agricultural labor force	1,178	1,024	953
Machine tractor stations	46	34	55
State sector	267	252	238
State farms	178	165	148
Cooperative sector	718	679	645
Private farmers	147	59	15

Source: (*28*).

The agricultural labor force is relatively young and well educated—45 percent of the labor force was under 40 years in 1980, up from 39 percent in 1975—and the number of graduates with specialized secondary and higher education degrees in agriculture was 37 and 30 percent higher in 1982 and 1980, respectively, than in 1975. Successful Government efforts to raise overall farm income to that of the industrial sector and to meet the cultural and recreational needs of the agricultural labor force has reduced the tendency somewhat for young people to leave the farm.

The decline of the agricultural labor force will bottom-out in the 7th FYP with an estimated loss of 20,000–30,000 workers by 1985. This loss will be most severe in the Czech lands and will coincide with an increase in the total workforce that will be 50 percent less than the comparable increase in 1976–80.

Officials announced major changes in agricultural wage policy early in 1982 as part of the expansion of the New System of Planned Management into agriculture. The major change is that wage levels on state farms will no longer be limited by an average ceiling. In theory, managers will be able to differentiate wages to a greater extent than before to reward performance. Discussion of reforms linking wages more directly to performance have a long history in Eastern Europe. However, the anticipated reductions in the Czechoslovak agricultural labor force and recent unplanned declines in the state-farm labor force are powerful incentives to move away from remuneration based on an average wage scale (15).

V. AGRICULTURAL PRICES AND PROFITABILITY

PRICES

Since the end in the sixties of compulsory delivery quotes for agricultural products to the State, officials have relied heavily on the structure of producer prices (prices paid by state organizations for farm goods) to influence output. This has meant periodic price increases for goods in short supply, primarily livestock products and livestock feed plus some industrial crops such as sugar beets. The gap between procurement prices and retail prices has been filled by subsidies from the central Government.

The need to adjust producer prices more frequently should increase through the rest of the decade. Energy prices economy wide are expected to increase a minimum 2 percent annually at least through 1985 and the Government appears committed to compensatory producer price increases.

The value of all prices paid to agricultural producers by state procurement agencies rose kcs 700 million on January 1, 1981, and by another kcs 7 billion on Janaury 1, 1982 (U.S. $1=kcs 5.60 in April 1981). The livestock sector was the major beneficiary in both increases but hop, tobacco, and corn prices also increased to compensate for the cost of hot air drying which is used extensively with those crops. Future producer price increases will likely be skewed in favor of forages and other feeds and, within livestock, toward cattle and sheep rearing.

Rising retail price subsidies for food from the federal budget accompanied the increased producer prices. In 1976–80, the amount of subsidies for retail meat prices alone nearly doubled from 1971–75, reaching kcs 12 billion in 1980. By 1981, direct consumer food price subsidies were valued at more than kcs 30 billion, or roughly 10 percent of the federal budget (38). In late 1981, a market basket of food worth kcs 100 contained kcs 40 worth of state subsidies.

The higher producer prices of the early eighties threatened to make it even more expensive to keep retail prices stable and this led to retail food price increases in early 1982 from 18 to 100 percent. Some of these price increase were the first in almost 30 years for several types of meat and meat products (18). This represents a major change in price policy indicating that the Government will no longer absorb completely procurement price increases.

PROFITABILITY

The recent producer price increases were long overdue. In 1975, state farms on average suffered a loss of kcs 75 for every hectare of agricultural land. By 1979, this loss had reached kcs 616. The situation was only slightly better on collective farms. While these farms remained profitable, the average rate of profitability had declined nearly 40 percent between 1971–75 and 1976–80. As a result, bank indebtedness of these farms increased significantly (39).

The financial situation of farms in the socialized sector improved somewhat following the price rises but profitability remains below expectations, particularly on state farms. These farms are much more heavily indebted than collective farms and federal budget grants and subsidies, for example, accounted for approximately 56 percent of all operating revenues in 1982 versus 12 percent for collective farms (37).

Improved farm profitability should gain increased attention through the eighties because of the economy-wide emphasis on improved efficiency. State farms could come under particular scrutiny by officials because of their chronic unprofitability.

VI. FOREIGN TRADE

Foreign trade plays an important role in the Czechoslovak economy as would be expected for a small, highly industrialized but resource-poor country. Manufactured and engineering products make up the bulk of traded goods with agricultural products accounting for only 7 percent of exports and 14 percent of imports in 1982, similar to levels in 1975. By 1982, the share of foreign trade with socialist countries had risen to approximately 75 percent from 70 percent in 1975. This share is one of the largest in the region.

Agricultural Trade.—Czechoslovakia traditionally runs deficits on its agricultural trade balance. The deficit in 1982 was valued at approximately $1 billion, 17 percent less (in current prices) than in 1976 and well below the record deficit in 1979 (Table 14).

Grain, oilmeal, vegetable oils and animal fats, cotton, coffee, tea, cocoa, fruit, and meat and meat products are the leading agricultural imports. The leading exports are brewery products, meat and meat products, sugar and malt products (Tables 15 and 16).

Czechoslovakia receives the majority of its fresh vegetables and fruit, tobacco, cotton and meat imports from other East European countries and the Soviet Union. Western nations are the primary suppliers of vegetable oils and fats, coffee, tea, and cocoa, protein meal and grain.

TABLE 14.—TOTAL AND AGRICULTURAL TRADE, 1976–82 [1]

[In billions of dollars]

	1976	1977	1978	1979	1980	1981	1982
Exports	9	10.3	11.7	13.2	14.9	14.9	15.2
Agricultural	.3	.4	.4	.5	.7	.6	.5
Imports	9.7	11.2	12.6	14.3	15.1	14.6	16.2
Agricultural	1.5	1.6	1.7	2.2	2.1	1.9	1.5
Balance	−.7	−.9	−.9	−1.1	−.2	.3	0
Agricultural	−1.2	−1.2	−1.3	−1.7	−1.4	−1.3	−1.0

[1] 1982 data are preliminary.

Sources: (6, 33).

TABLE 15.—MAJOR AGRICULTURAL IMPORTS, 1976–80 AVERAGE AND 1980–82

[Thousands of tons]

Commodity	1976–80 average	1980	1981	1982 [1]
Grain	1,679	1,975	1,003	1,326
Oilseeds [2]	135	91	51	109
Oilseed meal	643	828	722	767
Vegetable oil, edible	44	21	53	41
Cotton	109	114	109	126
Cattle hides [3]	(52)	(51)	NA	NA
Meat and meat products [4]	26	31	21	26
Sugar [5]	88	99	NA	NA
Tobacco	21	26	28	19
Fruits and vegetables	486	483	465	428

[1] 1982 data are preliminary.
[2] Rapeseed, soybeans and sunflowerseed.
[3] Converted from pieces to metric tons at 22 kilograms per piece.
[4] Includes poultry meat.
[5] Raw basis.

( ) = Estimate. NA = Not available.

Source: (3, 28).

TABLE 16.—MAJOR AGRICULTURAL EXPORTS, 1976–80 AVERAGE AND 1980–82

Commodity	Unit	1976–80	1980	1981	1982 [1]
Meat and meat products [2]	Thousands of tons	32	54	72	NA
Sugar [3]	do	249	239	197	138

TABLE 16.—MAJOR AGRICULTURAL EXPORTS, 1976–80 AVERAGE AND 1980–82—Continued

Commodity	Unit	1976–80	1980	1981	1982 [1]
Hops	Thousands of tons	8	9	7	9
Beer	Million liters	212	215	219	222
Eggs	Millions	54	23	66	13

[1] Data for 1982 are preliminary.
[2] Includes poultry.
[3] Raw basis.

Source: (3, 28).

A. Agricultural Trade Prospects

The traditional goals of export expansion and import limitation characterize foreign trade policy for the eighties. For 1981–85, exports are to increase by 31 percent in constant prices with exports to socialist countries up 28 percent and those to capitalist countries up 35 percent (4). No figures are available on planned import growth rates. It is certain though, that imports are slated to grow less than exports and any increase in imports will come from socialist and developing countries at the expense of those from developed capitalist countries. The share of trade conducted with CMEA (Council for Mutual Economic Assistance) members will remain steady or rise at least through 1985.

As a net agricultural importer, emphasis is on restraining farm imports. Throughout the seventies, agricultural imports sustained generally increasing per capita food consumption levels, particularly of meat, in excess of domestic capabilities. In 1976–80 for example, roughly one-quarter of the meat and meat products produced in Czechoslovakia was produced with imported feed (17).

The forced reduction in hog and poultry numbers over the last two years and a strong aversion against completely offsetting grain and oilseed production shortfalls through imports should hold down grain imports for the rest of the decade, but oilseed and oilseed meal imports (in soybean meal equivalent) should increase. Every effort will be made to obtain agricultural imports from nonconvertible currency countries first before turning to the West, although this policy can have only limited success.

Assuming a grain crop of 11.6 million tons in 1990, 1990/1991 grain imports should be about 945,000 tons, well below the 1976–80 average of 1.5 million. Oilseed and oilseed meal imports (in soybean meal equivalent) are estimated at 878,000 tons, up from the 719,000-ton average in 1976–80 (Table 17).

TABLE 17.—TOTAL GRAIN, OILSEED AND OILSEED MEAL UTILIZATION, 1976–80 AVERAGE AND 1990–91 PROJECTION [1]

[Thousands of tons]

Period	Production [2]	Feed use	Other use	Total use	Net imports
Grain:					
1976–80 average	10,059	7,613	4,058	11,671	1,612
1990/91 projection	11,610	8,487	4,068	12,555	945

TABLE 17.—TOTAL GRAIN, OILSEED AND OILSEED MEAL UTILIZATION, 1976–80 AVERAGE AND 1990–91 PROJECTION [1]—Continued

[Thousands of tons]

Period	Production [2]	Feed use	Other use	Total use	Net imports
Oilseeds and oilseed meal:					
1976–80 average	100	819	NA	819	719
1990/91 projection	117	995	NA	995	878

[1] Oilseed and oilseed meal utilization is in soybean meal equivalent and includes fish meal.
[2] Processing from domestic supplies of oilseeds and oilseed meal.

NA = Not applicable.

Sources: (28, 34).

An additional factor which will hold down agricultural imports is the official policy of reducing the country's foreign debt denominated in hard currencies (26). At $3 billion at the end of 1982, Czechoslovakia's net hard currency debt was one of the lowest in Eastern Europe. However, officials hold conservative attitudes toward Western borrowing, particularly in the aftermath of recent Polish and Romanian debt servicing problems. While the country will continue to borrow in Western capital markets, the borrowing should be small and the overall level of the country's hard currency debt in 1990 should be, at worst, no more than the present level.

B. Agricultural Trade With the United States

Czechoslovak-U.S. trade (imports and exports of merchandise) averaged $255 million annually in 1976–80. Trade was below $200 million in 1977 and 1978 but jumped to over $300 million in 1979 and 1980 because of much increased agricultural imports by Czechoslovakia. Conversely, trade was below $175 million in 1981 and 1982 because of a sharp drop in farm exports to Czechoslovakia. U.S. exports accounted for roughly 80 percent of the bilateral trade (dropping to approximately 65 percent in 1981 and 1982) with agricultural commodities consistently claiming an 80 percent or higher share of total exports.

Grain, soybean cake and meal, and cattle hides are the main U.S. export items. Czechoslovak imports of U.S. grain averaged 638,000 tons annually in 1976–82 and were particularly heavy in 1976, 1979 and 1980. Soybean cake and meal imports averaged 218,000 tons annually but varied widely from year-to-year. Cattle hide imports were fairly steady with imports averaging 528,000 pieces in 1976–82 (Table 18).

TABLE 18.—PRINCIPAL AGRICULTURAL IMPORTS FROM THE UNITED STATES, 1976–82

[Thousands of tons]

Commodity	1976	1977	1978	1979	1980	1981	1982
Grain	912	81	398	1,252	974	412	435
Soybeans	1	3	20	3	1	INS	13
Soybean cake and meal	475	341	130	243	218	36	85
Cattlehides [1]	678	680	586	685	318	334	415

[1] Thousand pieces.

INS = Insignificant.

Sources: (35, 36).

Little real growth is expected in bilateral trade through the eighties. The strong Czechoslovak intention to reduce grain imports and the desire to cut hard currency trade deficits will constrain demand for U.S. exports. Also, the United States does not grant most favored nation tariff treatment to the products of Czechoslovakia, nor is the country eligible for agricultural export credits from USDA's Commodity Credit Corp. Any substantial increase in the value of bilateral trade should be due to price rather than volume increases.

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GDR

THE GDR FACES THE ECONOMIC DILEMMAS OF THE 1980'S: CAUGHT BETWEEN THE NEED FOR NEW METHODS AND RESTRICTED OPTIONS*

By Manfred Melzer** and Arthur A. Stahnke**

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I. THE GDR ECONOMY AT THE BEGINNING OF THE 1980s: AN OVERVIEW

The GDR has what may properly be termed an orthodox Centrally Planned Economy (CPE).[1] As such, it has benefited from the advantages and suffered from the deficiencies inherent in that type of economic system. In later sections we will consider the systemic factors as they have affected GDR economic performance, but for now, we will discuss only the immediate, most pressing demands upon the economy as of 1980–1981, without regard to structural causes and effects. Even so, it should be noted at once that the systemic properties of the GDR economy contributed significantly to the set of circumstances which obtained there at the beginning of the present decade.

The most serious and immediate concern for the GDR leadership was its foreign trade dilemma. One element of that dilemma was the increasing disparity between the prices it was forced to pay for needed foreign-origin raw materials (whether from CMEA partners or elsewhere), and those it could obtain, via exports, for its finished products. The resulting deterioration in its "terms of trade" (perhaps on the order of 50% from 1973 to 1980),[2] imposed a heavy burden that has still not been overcome.

As a function of that development, and also because the GDR had chosen to accept extensive Western credits for the purpose of modernizing its industrial capacity (it also borrowed to cover grain purchases), it had run up a foreign debt on the order of $12–14 billion by the beginning of 1982, of which about $10 billion was owed to Western banks.[3] Even with the advantages it obtained from its peculiar set of relationships with the Federal Republic of Germany, the GDR had reached a point where it could no longer seek further credits as a strategy, and with the high interest rates which then obtained on the world market, it had a "Debt-Service Ratio" of approximately 40%, again at the beginning of the present decade.[4]

A second element of the GDR foreign trade dilemma resulted from the limitations the Soviet Union placed on its future deliveries to its CMEA partners. As the key source of many of the GDR's needed imports—the USSR provides the GDR with nearly 40% of its total imports—Soviet deliveries have rightly been called a matter of life or death. Thus, when Mosow decided to provide exports at only 1980 levels for the years 1981–1985, GDR leaders were forced to make a significant adjustment, even if they agreed that the Soviet position had merit.

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[1] For a discussion of the properties of an orthodox CPE, see: Paul Marer, "Reforming Centrally Planned Economies: a Conceptual Framework and Selected Aspects of the Hungarian Experience," (unpublished Manuscript, 1983, pp. 21ff. See also: Morris Bornstein, "Economic Reform in Eastern Europe," in: East European Economies Post-Helsinki, JEC, Congress of the U.S., 1977, pp. 109–110.

[2] See: Arthur A. Stahnke, "The GDR 1981–1985 Five Year Plan: Background, Objectives and Strategy, and Feasibility," The ACES Bulletin, (Winter, 1982) especially footnote No. 15, p. 111.

[3] For estimates of GDR debt levels in convertable currencies, based on Bank for International Settlement and ECE data, see: Doris Cornelsen, "Stabilization of Growth by Changing the Economic Mechanism: The GDR Economy in mid-1983," Economic Bulletin, October, 1983, especially Table 3, page 8. The Wharton Economic Forecasting Group estimated the GDR debt level at 12.8 Billion dollars as of Spring, 1982. See: New York Times, May 26, 1982. Finally, according to the Central Intelligence Agency, "Eastern Europe Faces Up To The Debt Crisis" (Volume II), the GDR hard currency debt at the end of 1982 was 11.1 billion dollars.

[4] New York Times, May 26, 1982.

In addition to its complex foreign trade/credit dilemma, the GDR faced serious domestic economic difficulties, some of which were long-standing. Of course, the external circumstances just noted had a direct, negative effect on all attempts to solve or at least cope with the internal problems, the most important of which were: [5]

1. An excessively labor-intensive system of production (e.g., in the areas of transport, maintenance and repairs), as well as lost man-hours from the too frequent disruptions of the production process;
2. Low capital productivity, brought about by the continued use of obsolete plant, which in turn was a function of limited investment capacity and systemic resistance to innovation and rationalization;
3. Inadequate results in the promotion of scientific and technological progress, in part because the purchase of Western "know-how" was no longer a real option. Even where that was not the case—as with domestically initiated innovation—the time lag between developing (or obtaining) the know-how and putting it into production was excessively long.
4. The spiraling costs for the needed material inputs, especially energy, whether from foreign or domestic sources.
5. Wasteful use of materials, brought about by a long-standing practice of stressing gross production as the primary goal.

As if these problems were not serious enough, the GDR leadership was also faced with the need to induce major structural changes in the economy. Given the limited availability of oil and oil derivatives, the GDR was forced to revert to expanding domestically produced lignite coal usage. And, given the exploding costs of energy and raw materials, a restructuring of major production systems was absolutely necessary, to save energy and to increase the extent of material refinement, thus to increase the final value per unit of material input.

Given this catalog of difficulties, one might well have expected the GDR decision-makers to opt for more modest targets for the current five year Plan period (i.e., 1981–1985) than those achieved in the years 1976–1980, especially since the targets then operative were not met. In fact, quite the contrary was decided upon: the 1981–1985 Plan called for economic growth to continue, but at rates well above those achieved during the previous half decade. (See Table I). No other European CMEA member projected such ambitious goals.

The 1981–1985 Plan goals [6] might thus be considered unrealistic.[7] Yet, the planners must have considered them to be the absolute minimum necessary to break out of the developing impasse. The foreign trade burden, again the most immediate and serious threat to continued economic viability, set the tone: while imports were to be somewhat reduced (no specific figures were given), exports were to be significantly increased, thus to stabilize and eventually to reduce the foreign debt. On the domestic side, continued growth in personal income and consumption were thought necessary for both economic and political reasons: high labor morale would be necessary for the Plan to succeed, and more generally, without continued growth in the consumption sector, the fundamental political goal of nationhood, based on the support of the populace, would be all the more ephemeral.

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[5] See: Manfred Melzer, "Probleme und voraussichtliche Entwicklung der Industrie in der DDR— Prognose des Wachstums bis 1990," Vierteljahrshefte zur Wirtschaftsforschung der DIW, Heft 3/4, 1980, pp. 361ff.

[6] The 1981–1985 Plan appears in Gesetzblatt der Deutschen Demokratischen Republik (Hereafter Gesetzblatt), Teil I, No. 35, December 9, 1981, pp. 405–416.

[7] See: Gernot Gutmann, "Intensiviertes Wachstum: Strategie der DDR fuer die Achtziger Jahre," Beitraege zur Wirtschafts- und Sozialpolitik des Instituts der Deutschen Wirtschaft, No. 1, 1982, pp. 29–42.

When one combines the private needs of the citizenry, which comprises the greater part of the end use side of Produced National Income, with the export strategy imposed on the GDR by its external indebtedness, the result is a pressing need to expand output. Even projected investment was affected by the demands for consumption and export, for it was to decrease by about 2% annually.

Given the problems outlined above, and given the production targets set, the "only" remaining question was obvious: "How?" The answer was embodied in the thesis: "Progress by resource-saving means!" Labor Productivity (i.e., produced value per person employed) was to increase more rapidly than Capital Intensity (i.e., capital utilized per person employed). Improved Capital Productivity (i.e., produced value per 1000 Marks of fixed assets) was made one of the most important goals for 1981-1985, to be achieved especially through selective use of investment to promote resource-saving processes in key sectors. Intensification (i.e., growth through productivity increases) was to receive concentrated attention. Investment was to be focused on modernization of old rather than construction of new plant, and to be concentrated on fewer projects, thus the better to speed the added capacity into operation. Intensification was also to be achieved by increasing the average daily usage of strategic equipment through more reliance on shift labor.

The actual GDR economic performance for 1981 generally went according to the annual Plan,[8] although investment, contrary to expectations increased modestly, and private consumption was well below the target figures. As to foreign trade performance, the situation deteriorated a bit further, for despite a substantial expansion of exports and a positive surplus in "visables," GDR net indebtedness to Western banks increased to over 11 billion, and the Debt-Service Ratio increased to about 45%.

In 1982, the GDR experienced serious, and in part unexpected economic shocks.[9] First, the Soviet Union reduced its oil deliveries by 10%, an action whose repercussions are all too obvious. Then, Western banks abruptly altered their previous policy which had permitted the GDR to obtain short-term credits as needed. Consequently, the GDR was suddenly forced to cut its imports drastically in early 1982, while simultaneously expanding its exports even further. The results of these external shifts were serious disruptions in the actual performance of the economy, and a significant gap between planned and realized production levels.

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[8] Doris Cornelsen, "Kraeftiges Wirtschaftswachstum: Zur Lage der DDR Wirtschaft an der Jahreswende 1981-1982," DIW Wochenbericht, February 4, 1982, pp. 73-80.

[9] Doris Cornelsen, "Verschuldungsproblematik vermindert Wachstumschancen in der DDR," DIW Wochenbericht No. 32, August 12, 1982; and Doris Cornelsen, "Weiterhin Anspannung aller Resourcen: Die Lage der DDR-Wirtschaft zur Jahreswende 1982-1983," DIW Wochenbericht No. 5, February 5, 1983, pp. 51-58.

Up to this point in time (March, 1984), the continuous efforts toward force frugalities in input utilization while still recording economic growth have been successful. For 1983, Produced National Income and Industrial Goods Production increased more than planned, and the Foreign Trade target was nearly met. It is true, however, that Retail Trade lagged significantly behind the target, for it rose only slightly above the 1982 level, and in real terms, the standard of living dropped marginally.[10] (See Table II, for key Plan Targets and production results for the years 1981–1984).

Though the ambitious targets of the current Five Year Plan appear to be out of reach and the desired progress in increased productivity was simply not realistic from the beginning, the fact remains: The economic policies of the GDR have been reactive to the severe problems it accumulated over the previous decade. The effort directed toward the expansion of exports, the more frugal use of production inputs, and the promotion of efficiency have resulted in an improved performance by the economy.

Finally, it should be noted that GDR production figures over the past several years would properly be assessed as positive, were its record compared with Western countries over the same time period, rather than with the targets of the Plan itself.[11] It should also not be forgotten that high plan targets (when nevertheless perceived as realistic) promote greater efforts toward fulfillment than would more modest goals. On the other hand, however, the fact that the Plan has not and will not be fulfilled has doubtless brought negative consequences as well, both in disruptions in the production process, as well as on the morale of the labor force.

II. SYSTEMIC REFORM: AN OPTION FOR THE GDR?

A. Past Experience

The GDR is a developed industrial country with an extensive production profile in manufactured goods. Within the CMEA, its products are considered as nearly equal to those obtainable on the world market, though prospective Western buyers typically assess GDR goods less positively.[12] This developed character of the GDR economy could not be entirely ignored even when the Soviet Union installed a political/economic system in its zone of occupation after 1945, and with the passage of time, the demands and constraints of a relatively industrialized economy were increasingly taken into account.

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[10] See: Doris Cornelsen, "Konsolidierung zu Lasten des privaten Verbrauchs: Die Lage der DDR-Wirtschaft zur Jahreswende 1983–1984," DIW Wochenbericht, February 2, 1984.

[11] This despite the fact that GDR methods of calculating growth rates differ from those used in the West, and result in somewhat inflated figures (comparatively speaking). See: Thad Alton, "European GNPs: Origins of Product, Final Uses, Rates of Growth and International Comparisons" (This Volume) for his calculations of GDR GNP growth rates and his international comparisons of growth rates.

[12] According to General Secretary Honecker, the GDR level of productivity lies about 30% behind that of the Federal Republic of Germany. See: "Mit Tatkraft und Zuversicht die vor uns liegenden Aufgaben zum Wohl des Volkes meistern," Neues Deutschland, 27/28 November, 1982.

The imperatives of an already industrialized economy were one major element in the most far-reaching economic reform undertaken in the GDR to date, the New Economic System (NES) which was introduced in 1963.[13] NES was intended to achieve greater efficiency in the production process through an optimal combination of central planning—which was to focus on long-term production and distribution goals—and economically based, "rational" decision-making at the managerial/operational level. In order to ensure the latter, indirect, "economic" levers, (particularly those affecting profits) were to induce appropriate decisions. This, in turn, also implied greater decision-making authority in the individual producing units.

The reform was never fully implemented, and by 1970, the GDR had essentially cast its experiment aside. In economic terms, the parochial interests of the producing units were too often inconsistent with the macro objectives of the central authorities. Managers utilized their recently acquired decision-making competence (e.g., over investment, production profile, etc.) to maximize profitability, without sufficient regard for centrally determined structural and developmental targets.[14]

Political considerations were also probably of some importance: in its origins, NES bore a certain similarity to economic trends in Czechoslovakia during the mid-1960s. When the Dubcek era was abruptly brought to an end in 1968, economic reforms similar to those undertaken in Czechoslovakia (e.g., NES) were politically tainted by association.[15] More generally, GDR leaders were no doubt fully conscious of the fact that economic reforms do have political implications, for the notion of association between political and economic phenomena is hardly novel to Marxists-Leninists.

Although the return to pre-1963 practices was not complete, (e.g., monetary instruments were retained as supplementary indicators), recentralization did include the drastic reduction of lower level decision-making authority, the partial withdrawal of the system of "economic" levers, and the reinstatement of rather comprehensive, administratively set production and distribution norms. By the mid-1970s, the limitations of the again highly bureaucratized system resulted in the problems long associated with CPEs (i.e., inefficiency, resistance to change, wasteful use of materials and disproportions).

The political/economic leadership in the GDR perceived these difficulties, and attempted to counter them with a series of steps which were intended to improve the internal consistency of the planning mechanism.[16] Specifically, the following modifications/improvements were introduced:[17]

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[13] For a thorough analysis of NES, see: Gert Leptin and Manfred Melzer, Economic Reform in East German Industry, (Oxford: Oxford University Press, 1978), 200pp.

[14] Ibid., pp. 83–97.

[15] This at least was the opinion of several GDR economists who were interviewed by Stahnke in 1981.

[16] Gert Leptin and Manfred Melzer, "Die Wirtschaftsreform in der DDR-Industrie: Rezentralisierung ohne Konzept," Deutschland Archiv, (December, 1975) pp. 1266ff.

[17] See: "Anordnung ueber die Ordnung der Planung der Volkswirtschaft der DDR 1976 bis 1980" Gesetzblatt (Sonderdruck Nr. 775a); and , "Anordnung ueber die Rahmenrichtlinien fuer die Jahresplanung der Betriebe und Kombinate der Industrie und des Bauwesens-Rahmenrichtlinie" Gesetzblatt (Sonderdruck Nr. 780), 1974.

1. Planning methods and procedures were to be "standardized;"
2. Middle-range (i.e., five year) Plan norms were to be more closely broken down into specific annual targets;
3. "Efficiency Planning," (i.e., the use of binding "efficiency measuring" norms) was to be initiated;
4. New procedures for the introduction, replacement and repair of capital in the production process were to be developed, with the intent of achieving better use of given capacities, as well as of speeding up the replacement of obsolete plant and equipment; and,
5. Efforts toward scientific and technological progress were to be better integrated into the larger planning process.

Though these modifications were at least appropriate in intent, their impact must have been disappointing, for their net effect was to further complicate the tasks of the central elite. "Standardization" in fact meant more, not less regulation; "efficiency" promotion foundered on the absence of objective, reliable value measures (i.e., economically based prices); procedures for replacement and repair of capital were developed, but not implemented; volatile prices on the world market and the persistence of old habits in managerial behavior also played major parts in thwarting the intent of the new regulations. By mid decade, the GDR leadership was again forced to cast about for new mechanisms and procedures. Neither NES nor the then existing system of central planning and control was satisfactory, as determined by the GDR decisionmakers.[18]

B. The Decision: Retention of the Orthodox CPE, but With Modifications

Despite the apparent limitations of the GDR economic model at the end of the 1970s, a return to a NES type concept was seen as neither desirable nor feasible. For one thing, a return to the use of profit as the key measure of success required a certain tolerance on the part of the central leadership, particularly when micro decisions might be contrary to macro objectives. Such tolerance was no more present in 1980 than it had been a decade before. Moreover, given the stress put on the economy by the need to meet the immediate imperatives of the day, even those favorably disposed to a new decentralization and the reintroduction of "economic" levers would have been hard pressed to explain how the necessary "slack" might be found to ease the transition.

Second, a NES type model would require a basic price reform,[19] a thorough revaluing of fixed assets and an improved mechanism for relating the costs of the several factors of production. Even a comprehensive restructuring of prices, which has last been undertaken in the mid-1960s, while retaining the basic principle of setting them administratively, would have been extremely difficult, for the costs for needed raw materials on the world market and even within CMEA were then unusually unstable. Moreover, as a political matter, prices for basic consumer goods and services were to be held constant, with state budget subsidies making up the differences. Hence, distortions in the pricing system could only be reduced in selected if important areas.[20] Finally, the criteria for setting prices administratively, i.e., a combination of costs of production and utility or use value, are neither adequate for the purposes of "rational" pricing, nor readily applied in many instances.

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[18] For a more complete analysis of these modifications and their weaknesses, see: Manfred Melzer, "The GDR Economic Policy Caught between Pressure for Efficiency and Lack of Ideas," in: Alec Nove, Hans-Herrmann Hoehmann and Gertraud Seidenstecher (eds), "The East European Economies in the 1979s," (London/Boston: Butterworths, 1982) pp. 45ff.

[19] For a more thorough examination of GDR pricing problems and practices, see: Manfred Melzer, "Wandlung im Preissystem der DDR" Schriften zum Vergleich von Wirtschaftsordnungen, Heft 30, 1983, pp. 51–78. Also, Manfred Melzer, "Preisplanung und Preispolitik in der DDR," Vierteljahrshefte zur Wirtschaftsforschung des DIW, Heft 1, 1977, pp. 59ff.

Even if these problems could be overcome, the results would still not necessarily be positive, for the NES model can properly function only if prices are "dynamic," i.e., only if they are modified in the market as cost factors change. To go that far, however, was never seriously contemplated, for that would endanger the very ability of the central authorities to plan and direct the economy.

Devising a system of rationally determined values for capital assets would have been just as difficult. As with prices, the only systematic revaluation had occurred in the NES period, a process which was both protracted and inconsistently executed. To undertake such a task again would presuppose more rational prices and would also be extremely time-consuming. It would also have required a shift from traditional thinking, according to which capital is a relatively less important factor of production, which has consistently resulted in its undervaluation. And, to complete the cycle, any attempt to relate capital and labor costs would also have been futile.

Without "rational" prices, as well as "real" values and/or cost assessments for capital and labor, use of the profit concept as the primary measure for successful performance at the operational level could well produce greater disfunctionalities than distorted prices and values in an orthodox CPE. That is, where increased decision-making authority is given to plant managers, and where profit earnings are the decisive consideration in production decisions, distorted prices will (must) lead to less than optimal performance, and could bring results sharply at odds with even reasonably clear national priorities.

For these and other reasons, decentralization on a NES type model was seen as simply out of the question. The GDR political/economic leadership was faced with the "necessity" of preserving the orthodox CPE while yet finding better ways to organize and direct it.[21] The answer settled upon was the Kombinate, as well as a number of other important but supplementary modifications in the planning and monitoring processes.

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[20] A. Beyer, K. Erdmann, G. Lauterbach, and M. Melzer, "Preisprobleme in der DDR," Analysen und Berichte aus Gesellschaft und Wissenschaft (Erlangen: Institut fuer Gesellschaft und Wissenschaft, 1980).

[21] See: Manfred Melzer and Angela Scherzinger, "Wirtschaftssystem der DDR im Umbau?—Wirtschaftsfuehrung toleriert verstaerkte Diskussionen," Vierteljahrshefte zur Wirtschaftsforschung des DIW, Heft 4, 1978, pp. 379ff.

III. THE KOMBINATE REFORM

In addition to a number of intended improvements in the planning process, selective but broad price increases (which were introduced in stages after 1976), and modifications in the structure of the foreign trade system, the GDR leadership sought to break out of its difficult situation most importantly through the restructuring of the industrial and construction sectors of the economy at the intermediate level into giant economic units called Kombinate or trusts.[22] To be sure, some centrally directed Kombinate had been created earlier: 37 were already in operation in 1973. However, it was only in 1978 and following that the effort to so organize all of industry and construction was given top priority, and the present legal basis for their creation was enacted in 1979.[23] The extent of the industrial reorganization is shown in Table III.

In 1980–1981, the regionally directed sector of industrial production was also organized into a network of Kombinate (27 such units were already in place at that time). At present, a total of 93 regionally directed Kombinate are in operation, with a total of about 138,000 employees in 968 enterprises. Their importance for total production output and labor force at the regional level (as percentages of the total) are 94% and 93% respectively.

The importance attached to the Kombinate reform has often been re-stated, but General Secretary Honecker was quite precise in 1978, when he said that Kombinate are "the most essential step in the perfection of management and planning at present." [24] Guenter Mittag, Politburo member with the primary responsibility for economic affairs, elaborated on the rationale for the Kombinate reform in these words:

> The decisive phases of the reproduction process are economically united in . . . [the Kombinate], from research and development, through projecting and instituting the means of rationalization, to actual production and marketing at home and abroad. All of this is also to serve product quality improvement.[25]

The Kombinate were expected to improve on the performance of the VVBs (i.e., Associations of Nationalized Enterprises) they replaced in the following ways: [26]

1. They were to accelerate scientific and technological progress. Here, the expectation was that an important part of all research and development work would be designed and executed within the Kombinate. This would result in efforts specifically appropriate to operational requirements, since the peculiar needs of the Kombinate could and would be particularly taken into account. Also, given the size and the resources of the Kombinate, the research and de-

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[22] See: Manfred Melzer, Angela Scherzinger and Cord Schwartau, "Wird das Wirtschaftssystem der DDR durch vermehrte Kombinatsbildung Effizienter?" Vierteljahrshefte zur Wirtschaftsforschung des DIW, Heft 4, 1979, pp. 365ff.

[23] "Verordnung ueber die volkseigenen Kombinate, Kombinatesbetriebe und volkseigenen Betriebe," Gesetzblatt Teil 1, No. 38, 1979, pp. 355ff.

[24] "Aus dem Bericht des Politbueros an die 8. Tagung des ZK der SED," Neues Deutschland, May 25, 1978.

[25] "Vorzuege des Sozialismus fuer hoehere Effektivitaet nutzen," Neues Deutschland, August 26/27, 1978.

[26] For an interesting discussion of the expected advantages of the Kombinate, see: Hannelore Hamel, "Die Kombinatsbildung in der DDR als Effizienzproblem," in: Guenter Hedtkamp (ed), Anreiz- und Kontrollmechanismen in Wirtschaftssystemen I, (Berlin: Duncker and Humbolt, 1981) pp. 67–97.

velopment capacity available would be sufficient to assure proper execution in practice.

2. They were to develop more efficient and rational production processes through the concentration of intra-Kombinate tasks, the re-allocation of resources, including labor, and the streamlining of processes and the elimination of outmoded production systems.

This expected advantage was made particularly important because the overall investment policy simultaneously decided upon was so restrictive. The Kombinate were expected to fill the gap with internally devised innovations (self made rationalizations), augmented where necessary with limited, focused investment. Given the size of the Kombinate and the resources they controlled, it was thought they could be and would be sufficient to this task.

3. Salutary effects were also to be achieved through direct consultation between Ministries and Kombinate directorates. Though consultation between Ministries and VVBs had long been the practice, the Kombinate representatives in such meetings would have the important new advantage of possessing information and understanding drawn directly from the operational units they supervised; the VVBs had been mere administrative units one step removed from the enterprises themselves.

The expectation, then, was that the planning, control, and execution functions would be more flexibly performed as a result of informal face-to-face meetings, and that the Ministries would obtain a clearer picture of what could actually be accomplished. For their part, the Kombinate General Directors would have greater influence on the entire economic process, given their access to the Ministries plus their monopoly of knowledge about operations. If the expectation could be realized, more intensive production, which could be achieved only from below, would be the result.[27]

These several improvements, in turn, were to simplify the central leadership and planning functions. The Kombinate were accorded greater internal competence than the VVBs had had.[28] At the same time, given the relatively few Kombinate, closer contact between them and their respective Ministries was expected, especially in taking prompt, responsive actions to major, concrete problems.

In all of this, the Kombinate General Directors and their assistants were assigned a crucial role. In theory at least, they were given tremendous internal authority over virtually all elements of the production process, even to the point of reallocating resources and tasks from one enterprise to another.[29] Moreover, given their access to the Ministries, they were expected to have considerable potential impact on central decisions.

Overall, the Kombinate General Directors were assigned a threefold responsibility: First, they were to be deputies of their respective ministers, and therefore responsible for the execution of Ministry directives. Second, they were also to be spokesmen for the Kombinate in ministerial circles. Third, they were to be entrepreneurs in that they were obligated to maximize the performance of their respective conglomerates through daring, innovative decisions. How these several, potentially conflicting roles were to be reconciled was not entirely clear.[30]

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[27] For more details on Kombinate formation, see: Kurt Erdmann and Manfred Melzer, "Die neue Kombinatsverordnung in der DDR—Moeglichkeiten und Grenzen von Leistungsimpulsen der neugebildeten Kombinate," (2 parts), Deutschland Archiv, September, 1980, pp. 929ff, and, October, 1980, pp. 1046ff. See also, Manfred Melzer, "Combine Formation in the GDR," Soviet Studies, No. 1, 1981, pp. 88ff.

[28] See: Willy Hofmann, "Zentralisierung von Funktionen im Kombinat," Die Wirtschaft, October, 1979, p. 16.

[29] See: Eva Girlich and Christine Neuhaeuser, "Probleme der Zentralisierung finanzieller Mittel und Fonds in den Kombinaten," Wirtschaftsrecht, Heft 1, 1979, p. 29.

Of primary importance in this reorganization was (and is) the question of centralizations vs. decentralization of authority. The answer (i.e., to the question: Who gained what at whose expense?) was and is not obvious. On the one hand, the Kombinate clearly were to have greater internal authority than did the VVBs, for they could modify the structure and responsibilities of the individual producing units unilaterally, reallocate resources as was thought desirable, and directly control specialized functions such as research and development or marketing. Moreover, given their monopolistic character and their superior fund of information and expertise in their respective areas of responsibility, they in practice must have had (and must have) considerable leverage in Kombinate-Ministerial negotiations.

On the other side, Ministries still retained great authority over the Kombinate. They had far-reaching rights of intervention in specific areas, even down to the individual producing units. Moreover, the system of centrally determined norms, rations and controls was retained in essence, even tightened, so that Kombinate General Directors could not freely decide on such elemental matters as how much to invest, what wage scales or prices should obtain, or, in some cases, what product mix should be produced.

The basic reorganization of industry and construction into Kombinate was supplemented by another structural modification, the placing of Foreign Trade Enterprises (FTEs) under Kombinate jurisdiction.[31] This move was a response to perceived weaknesses in the traditional structure, in which FTEs were directly under only the Ministry of Foreign Trade.

In particular, the previous structure was seen as inflexible in the face of changing market conditions, insensitive to the specific needs and/or preferences of buyers and sellers, and dominated by bureaucratic regulation in a field where entrepreneurial activity was highly advantageous. However, the new reorganization was only partial, for the Ministry of Foreign Trade retained jurisdiction over the FTEs, thus making them subject to dual control. The potential for mischief resulting from this "dual supervision" is clearly significant in cases where macro considerations are at odds with micro preferences.

The specific structural arrangements varied from FTE to FTE. In 24 cases, the FTEs were placed directly under a single Kombinat, and given export and import targets (whether in quantity or in product mix) appropriate to the production profile of the Kombinat to which it adhered. In 20 other instances, where one FTE was to "service" a number of Kombinate, it was placed directly under the appropriate industrial Ministry. Finally, ten FTEs were left exclusively under the Foreign Trade Ministry.[32]

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[30] Manfred Melzer, "Combine Formation and the Role of the Enterprise in East German Industry," In: Ian Jeffries (ed) "The Industrial Enterprise in Eastern Europe," (Eastbourne and New York: Praeger, 1981), pp. 95-113.

[31] For an extended analysis of the reorganization of the GDR foreign trade system, see: Maria Haendcke-Hoppe and Erika Lieser-Triebnigg, "Oekonomische und juristische Aspekte der Veraenderungen im DDR—Aussenhandelssystem," In: Gottfried Zieger, Recht, Wirtschaft, Politik im geteilten Deutschland: Festschrift fuer Siegfried Mampel, (Cologne: Carl Heymanns Verlag KG, 1983) pp. 541-561.

This organizational modification was expected to improve GDR foreign trade performance, particularly in export promotion, by giving the Kombinate a direct supervisory role in foreign trade activity. Since, as will be noted shortly, foreign trade performance has become a significant measure of plan fulfillment, Kombinate General Directors could be expected to utilize their authority over the FTEs to expand exports. And in the process of such supervisory efforts, the FTEs would be made more sensitive to foreign market conditions.

On the other hand, the preservation of the Foreign Trade Ministry authority over FTEs was intended to preserve central coordination and control over this important area of economic activity, with the potential for conflict just noted. Even so, the reform was at least a modest, perhaps even a significant addition to Kombinate authority, for now they were responsible not only scientific and technological development, production and marketing, but now also for the performance of the FTEs themselves. And Kombinate which had no FTE of their own were given the right, although revocable, to conduct certain foreign trade activities alone, subject of course, to the limitations and conditions of the many norms embodied in the Plan and the numerous additional control mechanisms.

IV. REMOLDING THE OPERATIONAL MECHANISMS

As noted above, the efforts to improve the planning and supervision of the economy in the second half of the 1970s met with limited success at best. In fact, over time, these goals seemed even further beyond reach.

Thus, the GDR leadership was faced with the need to develop a new scheme or conception which might be the vehicle for at least halting the slide into stagnation. Better yet, such a revision might even generate a revitalization of the economy. Structurally, as just outlined, the new conception centered on the creation of Kombinate, but it was also necessary to develop a network of procedures and norms for planning and supervising the new structures now in place. The basic regulations which embody the results of this effort were a new "Order of Planning" and a related "Basic Set of Operating Principles," both of which were issued in 1979.[33] The first was the system of regulations under which the 1981-1985 Five Year Plan was to be devised, while the second established the rules for drafting the several annual Plans for those years. Since then, as will be shown below, a great many additional, supplementary regulations have also been issued.[34]

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[32] Haendcke-Hoppe and Lieser-Triebnigg given a more precise and detailed breakdown of the various organizational forms now used in relating FTEs to producing units. See: Ibid., p. 548.

[33] See: "Ordnung der Planung der Volkswirtschaft 1981 bis 1985" Gesetzblatt, Sonderdruck, No. 1020, November 28, 1979; and "Rahmenrichtlinie fuer die Planung in den Kombinate und Betrieben der Industrie und des Bauwesens," Gesetzblatt, Sonderdruck, No. 1021, November 30, 1979.

The key objective in this concept was to somehow draw the Kombinate into the planning process itself, in such a way as to utilize their concrete knowledge and information about production and innovation potential. Such expertise is available only at the Kombinate level. In the words of a standard, 1982 text:

> By transferring responsibility for production of entire industrial branches [to the Kombinate], by providing them with vast material and financial resources as well as a considerable labor force, the central authorities have been given the opportunity to concentrate on the basic questions affecting the major reproduction processes of the economy as a whole. Kombinate responsibility is to be developed and supported by the establishment of long-term, economically binding Plan norms. The reproduction processes of the Kombinate, when compared with those of the individual enterprises, are qualitatively different and new The task of planning, therefore, is to make certain that the closed, internally complete production processes [of the Kombinate] will be further developed, and that the specific tasks given them in the context of macro objectives, will be achieved. The basic task of the Kombinate can be carried out only over the long run, and only through their own formulation of a long-term concept of development. *In this process, the Kombinate must become partners of the central state organs in a qualitatively new way.* (authors' emphasis).[35]

Thus, the Kombinate were given the right, even the obligation, to participate directly in the planning process, by both providing information, as well as by recommending alternatives to the central organs. In particular, their recommendations as to: (a) how energy and other factor inputs could be saved; (b) how technology and product quality might be improved; (c) how their production profiles might be altered with beneficial effects; and (d) how exports might be increased, were all to carry great weight in the final central decisions.

Kombinate General Directors were given the responsibility of allocating the centrally determined goals among their respective enterprises. On the other hand, they were also to direct their efforts toward the fulfillment of centrally determined goals. As a result, they were expected to refine the goals on the one hand, and on the other, they were also to use their own decision-making latitude as to internal organizational and production responsibilities to see that the centrally set norms were met. In particular, the Kombinate leadership were to: (a) assess their overall potential for product development, for reorganization of production processes, and for reductions in their use of raw materials and semi-finished products; and (b) determine means for the more efficient use of labor and capital, including the reorganization of processes and enterprises.

To cover this changed role for the Kombinate, a new set of regulations was adopted in 1982 which set the mutual contractual rights and obligations between them and their enterprises as well as between them (or their enterprises) and third parties.[36] These regulations had the benefit of discussion and evaluation of previous experience which had taken place over the previous several years.

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[34] See for example, "Anordnung ueber die Ergaenzung der Ordnung der Planung der Volkswirtschaft der DDR, 1981 bis 1985," Gesetzblatt, Teil I, 1981, pp. 149ff.; "Anordnung No. 2 ueber die Ergaenzung der Ordnung der Planung der Volkswirtschaft der DDR 1981 bis 1985," Gesetzblatt, Teil I, 1982, pp. 109ff.; "Anordnung No. 3 ueber die Ergaenzung der Ordnung der Planung der Volkswirtschaft der DDR 1981 bis 1985," Gesetzblatt, Sonderdruck Nr. 1122, 1983; and, "Neufassung des Teiles K der Planungsordung," Gesetzblatt, Sonderdruck, No. 1020/1K 1983.

[35] Autorenkollektiv (Leiter: Hans Walter Thiele) Handbuch der Planung fuer Kombinate und Betriebe (East Berlin: Verlag der Wirtschaft, 1982) pp. 28–29.

[36] "Gesetz ueber das Vertragsystem in der Sozialistischen Wirtschaft—Vertragsgesetz," Gesetzblatt, Teil I, 1982, pp. 293ff.

Since all these efforts towards greater efficiency in the production process were to be undertaken within the context set by minimum, centrally determined rules, (e.g., quality standards, factor input ratios, and performance requirements), and in practice under the "watchful eyes of the central authorities," the importance of the planning and control documents was substantially increased. Up to about 1981, however, this modification was to be seen more as a set of conditional, preliminary obligations than as a mere expansion of bureaucratic regulation from above. Later, as will be explained below, further changes were made. To a certain extent, the Kombinate became participants in the entire process of planning and control, not mere objects of central manipulation. At the same time, of course, they remained objects of certain control mechanisms.

Even so, this was an important improvement or advantage, for both the central organs (who now should have better information upon which to base their subsequent decisions), as well as for the now more involved Kombinate. Even if decentralization was formally effected in only limited ways, and the extent of such decentralizaton or diversification of decision-making authority is much disputed in the West, the dovetailing of this planning system with the structural reforms discussed above, seems to be a step toward an improved means of problem solving.

It should be noted in passing that within the planning process as a whole, one should distinguish between long-, medium-, and short-term plans, though all are to be synchronized. (In these plans, prognoses of many sorts also play a great role, particularly in shaping future goals!) Examples of long-term plans would include the housing construction program (which is to be completed only in 1990), as well as projections for energy and fuel acquisition and usage. The Five Year Plan is the key example of a middle-range plan, while the annual plans, which are increasingly seen as integral parts of the Five Year Plan, are considered short-term. Annual plans, of course, are particularly important as adjustments to immediate considerations such as shortages or fluctuations in supply and/or demand.

The system of obligatory norms, which increasingly have included efficiency as well as quantity measures, was substantially expanded over the years 1978–1981. Important were the following: (a) quantity of industrial goods produced; (b) production actually marketed; (c) provision of finished goods for the population; (d) net production; (e) re-use of industrial wastes; (f) investment; (g) total costs; (h) number of jobs eliminated; (i) costs per 100 Marks of production; and, (j) export and import totals by region, as well as export profitability by economic sector.

Since 1981, another norm, "production of new consumer goods in quantity and value," was introduced. Apart from several adjustments within this set of indicators—which happens frequently—in 1981, three or four indicators were elevated to the status of "basic indicators for performance evaluations." Before 1984, these were: (a) industrial production; (b) net production; and (c) basic material costs per 100 Marks production. As of 1984, they are to be: (a) net production; (b) net profit; (c) exports; and (d) goods and services for the population. This identification of special targets is to be seen as an attempt to measure the "actual" contribution to production, to increased efficiency, and to the better satisfaction of consumer needs.[37]

The Kombinate also play a major role in the process of balancing needs against resources. This can be seen in the breakdown of State Plan Balances according to administrative level responsible for their determination. 376 are to be set by the Council of Ministers, and an additional 674 by the State Planning Commission. The Kombinate, in turn, are responsible for setting the figures for 1086 elements, but these must be approved by the appropriate ministry. (All told, these centrally set or approved norms cover 76 percent of all production by value.) Additionally, some 2400 balances are made by the Kombinate or individual producing units, which in any case must be approved by the Kombinate General Directors.

The main thrusts of the balancing process at present are several: First, the specific allocations of the most basic and important energy sources and raw materials to the individual producing units are to be tied to the overall availability of such goods, all with the goal of achieving optimal production results. (Additionally, greater refinement or processing of raw materials is to be promoted.) Second, equipment balancing is to support improved export performance and closer attention to the needs of the investment program. Third, balancing in the consumer sector is to assure the adequate availability of goods at each of the three price levels, as well as parity in the availability of goods among the several regions of the country.

Since mid-1982, new and more stringent norms have been formulated.[38] These placed product or production specific limits on the use of key material inputs down to the enterprise level. Thereafter, in early 1983, allocated or available materials, spare parts or semi-finished products which were not needed during the plan period (above a stipulated acceptable inventory) were either to be used for some value creating or useful purpose, or resold back to the supplier from which they had been obtained.[39] Thus, the controls applied in the balancing process were substantially increased and/or sharpened.

The hope in involving Kombinate in the balancing process is that the difficult problem of coordination can better be solved. That is, given the present constraints on raw material imports and the great need for the economy to function at full capacity, the Kombinate, given their peculiar qualities, should have the capacity to make and implement appropriate and timely decisions as to balancing.

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[37] See: Doris Cornelson and Angela Scherzinger, "DDR—Wirtschaftssystem: Kontrollmechanismen erneut verschaerft" DIW Wochenbericht, No. 21, 1982. See also: Angela Scherzinger, "Weiterentwicklung des Wirtschaftsmechanismus in der DDR," DIW Wochenbericht, No. 41, 1983.

[38] See: "Verordnung ueber die Arbeit mit Normen und Normativen des Nationalverbrauchs und der Vorratshaltung," Gesetzblatt, Teil I, 1982, pp. 515ff.

[39] See: "Anordnung zur periodischen Ermittlung nicht benoetigter verbraucherseitiger Bestaende durch die Bilanzorgans sowie ueber die Verantwortung und materielle Stimmulierung der Hersteller fuer den effektiven Einsatz der Mehrbestaende ihres Produktionssortiments Bestandsverwertungs Anordnung" Gesetzblatt, Teil I, 1983, pp. 146ff.

Foreign trade calculations are embedded in both the planning and balancing processes. Organizationally, the Ministry of Foreign Trade drafts a Foreign Trade Plan in which the following are included: (a) the profile and quantities of goods exchanged; (b) the currency values of exports and imports; and, (c) the resultant balance of payments. These data are inserted into the Plan by the State Planning Commission.

The industrial ministries are obliged to draft foreign trade plans for their respective sectors, and to coordinate them with each other as appropriate. For example, the Ministry of Finance has the task of working out the payments from and the receipts for the state budget which will result from the planned foreign trade levels, since it is responsible for drawing up the entire state budget.

Within the limits and conditions set by the centrally given Plan targets, Kombinate and FTEs are also required to submit their own draft plans for foreign trade. These are to include the following: (a) level of exports and imports in both quantity and value terms, both for socialist and non-socialist countries; (b) export of plant, as well as compensation trade; (c) value of license sales and purchases; (d) exports and imports according to state plan positions; (e) exports from new as well as refined products; (f) products (by value) exchanged under "Specialization and Cooperation Agreements;" and (g) export profitability in socialist and non-socialist trade. These norms include both centrally determined indicators as well as the resultant projections as set by the Kombinate themselves, and the intent here is to promote results above the targets.

Price determination poses a special problem for the planning process as it pertains to foreign trade. In addition to using valuta prices, planning calculations are also made according to domestic prices. For imports, the domestic planning price is called the "Import Delivery Price." It is calculated by adding and/or subtracting a complicated set of levies or subsidies to the initial, administratively set price for that product. The planning price used for exports is simply that used in comparable, entirely domestic transactions. In intra-CMEA trade, the Valuta (foreign currency unit) Mark price used in the Five-Year Plan follows the prices set in the currently operative agreements, while plan Valuta prices for trade with non-socialist countries are based on the actual prices used in 1980. (Price changes in CMEA agreements are incorporated into the planning process by using rough coefficients, especially when the annual plans are prepared.) In either case, however, the Ministry of Foreign Trade has some flexibility in setting Valuta prices.

From all this it should be clear that volatile price changes on the world market, such as obtained in the past decade pose great difficulties for planning GDR foreign trade. For that reason, the GDR has shown a strong preference for long-term agreements with set prices. Such a preference, however, has not been reciprocated, at least by its Western trade partners, for changes in cost, price, and demand levels will necessarily result in windfall profits or losses for one party or the other.

V. 1981-1983: THE PROBLEMS INCREASE

It was noted earlier that although the GDR faced extremely serious economic difficulties as the 1980s began, in the succeeding years matters became progressively even worse. That is, even with a very creditable performance each year—considering the circumstances—the GDR was not able to generate the basis for a "cushion" which might have served as a buffer against the looming threat of actual crisis. The result was that the leadership was under great pressure to do more, and in turn, needless to say, they continued to apply increasing pressure on the institutions and people below them.

Even without these unfortunate developments, it would have been necessary to flesh out and/or to modify the structures and processes initiated in the late 1970s and following. Since the changes were basic and came with such frequency, no one could be certain how the various elements would fit together. In fact, it is nearly certain that an element of confusion was one result of this "reform."

The specific actual content of the modifications introduced in the early 1980s, however, was also partly a reaction to the very real and dire circumstances the GDR then faced, so it is therefore appropriate here to examine both the objective, actual, non-systemic dilemmas as well as the limitations and deficiencies in the new system itself.

Taking the external and/or non-systemic problems first, it is certain that the GDR's foreign trade position continued to be the most severe obstacle to continued improvement in the GDR living standard and to sustained economic growth. On the one hand, its economic ties with the Soviet Union continued to become more and more disadvantageous each year. GDR terms of trade worsened sharply as the previous benefits from CMEA pricing policies (i.e., annual adjustments of CMEA prices on the basis of the average world market price for each of the previous five years) were lost. This is best shown with the most important and extreme case, oil, where (as shown in Table IV), the price paid by the GDR rose by 23% in 1981, 52%(!) in 1982, and a likely 23% in 1983. Overall, GDR terms of trade worsened by at least 25% vis-a-vis the USSR during the years 1979-1982, with most of that deterioration occurring in 1982.[40]

Moreover, in late 1981, the Soviet Union decided to reduce its oil deliveries to CMEA partners by 10%, beginning in 1982. The impact of that decision is difficult to assess fully, but there can be little doubt that the reductions in the internal GDR allocations of oil-derived fuels to producing units, as well as the strict regulation of the transport system which was begun that year, were immediate responses to the Soviet decision. Each of these steps caused serious dislocations in the GDR economy.

As if this were not enough, the GDR also registered little net improvement in its trade relationships with Western partners. True, terms of trade deterioration did not occur here.[41] True also that in 1982 the GDR, through extreme austerity, was able to run a positive trade balance with the West, for the first time since the mid-1960s. The price paid for this achievement, however, was very high: imports from the West were severely curtailed (as can be seen in Table V).

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[40] According to DIW calculations, Soviet terms of trade with the entire CMEA bloc improved by 25% over the years 1979-1982. Given the composition of trade between the GDR and the USSR, the GDR position was most probably somewhat worse than average.

In this regard, the GDR had two equally untenable alternatives: First, it could restrict imports and thus improve (slightly) on its foreign trade position, a move which would improve its credit worthiness and reduce its costs of debt servicing. However, the adverse side of this choice was the fact that its import needs (e.g., spare parts or specific high technology machinery) would be poorly met and needed economic growth would thereby be reduced. Second, it could continue to import as before, but only at the price of reduced credit worthiness and increased financing costs.

In general, the GDR leadeship chose the first alternative, with periodic exceptions to meet short term emergencies. The results were in one sense impressive, for the slide into ever greater indebtedness was halted. However, when one considers how little progress was made toward the elimination of the foreign debt, and at what cost, it is clear that the problem was not to be eliminated in the short or middle run.

A second problem which grew as the years passed was that of satisfying consumer demands and/or expectations. So serious was the economic situation that even according to official data, the availability of consumer goods (as registered in retail trade totals) remained virtually constant for the first half of the Five Year Plan period. When one recalls that prices for new (and some old) products were rising, often very substantially above those of the products they replaced, the conclusion seems reasonable that the GDR living standard may actually have deteriorated over that time frame. Also, it is probable that shortages in consumer goods increased somewhat.

Apologists for the Government have been quick to point out that in a number of significant ways, goods and services provided for the consumer sharply increased in the 1980s: Expansion or growth in housing construction, allocations from the state budget for various subsidies and services, production of durable consumer goods as well as the supply of fruits and vegetables are the examples most commonly cited. (See Table VI.) There is merit to such claims, although they cannot gainsay the significance of the macro data which show a slightly negative trend on balance.

The implications of the stagnation in living standard (despite the Five Year Plan targets) are not easily asssessed. On the one hand, it may be that the current Government/Party practice of holding living standards relatively constant is based on the belief that the likely adverse consequences are tolerable (i.e., that unrest or disaffection are not a particularly serious or immediate problem). Also, as East-West tensions have heated up recently, the GDR has had the "opportunity" to lay the blame for stagnation in consumer living standards on U.S. military policies, and the need to respond with expanding outlays for defense purposes. On the other hand, there is some evidence of public dissatisfaction with their economic circumstance. Secretary Honecker himself has noted that labor productivity is a key issue to be met, and that labor morale is unacceptably low.[42]

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[41] According to the DIW, GDR terms of trade worsened by about 2% in its FRG trade and showed a small plus with its other OECD partners.

In the years ahead, the GDR planners will be faced with extremely difficult choices on this front, for on the one hand, rising labor productivity will be necessary for future growth. On the other hand, better labor productivity would seem more easily achieved with higher wages and increased allocations to the consumption sector. The problem is that consumption increases subtract from the potential for investment and might therefore have a retarding effect on economic growth.

If one turns to the trends in the several factors of production during the early 1980's, one finds further evidence of constraints and pressure on the GDR economy. The labor force was rapidly approaching its optimal size, as is shown in Table VII. That is, by 1985, the net increase in the number of persons employed would be down to annual increases of only 20,000, with net reductions in the pool of "employables" coming some time in the second half of the 1980s.

Given the increasing immediacy of the quantitative limits in the size of the labor force, the CDR authorities have put great stress one: (a) qualitative improvement through education and training; (b) improved utilization of the labor force through a better matchup between worker qualifications and the positions or jobs they could obtain; and (c) labor-saving strategies such as the introduction of robots and/or increasing the level of automization in industry.[43] In each case, specific targets were set for the years immediately ahead.

The record of the GDR over the past decade (i.e., the 1970s) as to training the labor force was rather good if not spectacular. On the average, the number of workers who completed some form of practical training increased by about 2% annually, so that as the 1981-1985 Plan period began, just over 80% of the labor force had matriculated from such formal programs.[44] By 1985, that figure should increase to above 85%. Assuming that in most cases educational/training programs impart useful skills (and most Western observers give the GDR educational system rather good marks in this respect), the quality of the labor force is not a problem.

The same cannot be said of the use to which labor is put. References have frequently been made to the apparent facts that too many workers are overqualified for the jobs they have taken, that too many jobs involve fully manual activities and often under physically difficult circumstances, and that too much potential labor is lost through job switching, production breakdowns, and "illness."[45]

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[42] See his report to the Fifth Session of the SED Central Committee, in Neues Deutschland, November 27-28, 1982.

[43] Most of the questions are treated in: Helmut Koziolek (ed) Hauptwege zur Steigerung der Arbeitsproduktivitaet, (East Berlin: Akadamie Verlag, 1978) 427pp.

[44] Statistisches Jahrbuch der Deutschen Demokratischen Republic, 1982, pp. 114-115.

[45] See: E. Sachse, "Probleme und Grundrichtungen der Entwicklung and rationellen Nuetzung des Arbeitsvermoegens," in Koziolek (note 43), pp. 337-341.

To meet these several negative circumstances, the current Plan calls for: (a) the introduction of 41–43 thousand robots, each of which is to replace about 3 workers; (b) the widespread implementation of the "Schwedt Initiative," by which new production tasks are to be undertaken within a Kombinat or an enterprise for which the necessary manpower is to be drawn from other divisions or teams within the unit; (c) sharp reductions in the number of workers employed in manual and/or physically taxing positions; (d) reductions in time lost through breakdowns in the production process by improved maintenance; and (e) reductions in time lost because of "illness" or job-switching through improved methods of motivating the labor force.

Some of these efforts have shown, and in all likelihood will continue to show success in some measure. By mid-year 1983, for example, 26,000 robots had already been installed,[46] and other forms of automation had doubtless also had a salutary effect in reducing labor scarcities. On the other hand, however, the price of a full employment policy almost inescapably is reduced productivity, whether due to mismatches between worker qualification and positions held, or to indifference based on the knowledge that one cannot be denied the right to work. And when one adds the consideration that the living standard currently is not rising much in the GDR, and that therefore non-monetary incentives must be the primary means of promoting better worker performance, the conclusion seems fair that the labor supply, in terms of its effective contribution to the economy, will continue to be a limiting factor in the 1980s.

Just as the GDR leadership faced the prospect of virtually no increase in the size of its labor force, at least by the end of the current plan period, so too its prospects for expanding its capital assets were limited. Indeed, for the reasons noted above, the economic strategy for the 1980s rested in part on the principle that investment levels would be held virtually constant. The 1981–1985 Plan calls for a total investment of 256 billion Marks in 1980 prices--still a considerable sum—which, when compared with the actual investment for 1980 (i.e., 54.5 billion Marks) works out to about a 2.1% average annual decrease. The comparable figure for the actual investment during the years 1976–1980 was an average annual increase of 3.7%.

Moreover, this investment policy was devised despite the facts that investment costs in several key areas were likely to increase steeply, and in other cases, high priority needs would continue to demand large shares of the total investment pie. The most obvious case of increasing, but absolutely necessary investment costs was that of domestic raw material recovery,[47] including the use of secondary by-products; coal mining investment costs, for example, were expected to double per unit of final product over just a few short years.[48] The first priority areas where investment demands would continue to be high—and absolutely necessary—included the housing construction program, which is the centerpiece of GDR social policy in the 1980s, and the modernization of the transport network, particularly with the electrification of the railroad system.

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[46] See the 1983, Six month plan fulfillment report, in: Neues Deutschland, July 16–17, 1983.

[47] According to H. Steeger, 60% of all industrial investment for 1981–1985 must be for energy related purposes. See: "Zu einigen volkswirtschaftlichen Erfordernissen des weiteren Vervollkommnung der Planung der Grundfondsproduktion," in: Helmut Koziolek (ed) Fragen der weiteren Staerkung der Material-technischen Basis, (East Berlin: Akademie Verlag, 1982), p. 98.

[48] See: Bericht des Zentral Kommitees der Sozialdemokratischen Einheitspartei Deutschlands an den X. Parteitag der SED, (East Berlin: Dietz Verlag, 1981), p. 59.

When one subtracts these unavoidable outlays, as well as the resources necessary for the most urgently needed projects, not much remains for the other sectors—which nevertheless are to be transformed and modernized, and in the process, forced to develop more efficient means to produce improved products.

With these considerations and/or limitations in mind, State Planners devised an investment policy which placed severe restrictions on the use of investment funds for new projects; they chose instead to concentrate on refitting and modernizing existing plant. Moreover, investment was to be concentrated on fewer projects which were to be brought into production much more rapidly than historically had been the case.[49] Finally, great emphasis was to be placed on intra-enterprise and Kombinate rationalization.[50] That is, more efficient means of production were to be conceived and implemented within the producing units themselves,[51] for example by reorganizing a production process while still using equipment on hand, or at most, while adding a minimal amount of new machinery. In this way, it was hoped that greater efficiencies could be achieved, especially through the combining of important means of rationalization (e.g., through the use of high productivity technology) with the capital stock already on hand.[52] In addition, production increases were to be achieved by using capital more hours per day,[53] and by improving the quality of repair services, thus to eliminate or at least to reduce the "down time" and to lengthen the time span in which existing capital could be utilized. Finally, the process of retiring old capital stock was to be retarded, in principle by an average of 30%.[54]

Such an austerity policy for investment, combined with the official thrust toward intensification, leads to far-reaching consequences for the future development of the sectoral structure of GDR fixed assets, as well as to their future utility. As a result, prognoses or predictions about the future state of GDR capital assets are difficult to make at best. In addition, such attempts are even more problematic by virtue of the fact that since 1977, the GDR has not published statistics on capital assets by industrial sector. A "best guess" as to sectoral distribution of such assets is presented in Table VIII.

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[49] See: Willi Stoph, "Direktive des X. Parteitages der SED zum Fuenfjahrplan fuer die Entwicklung der Volkswirtschaft der DDR in den Jahren 1981 bis 1985," in: Neues Deutschland, April 15, 1981.

[50] Roland Haker, "Die Modernisierung der Grundmittel Planen und ihre Leistungsfaehigkeit erhoehen," Die Wirtschaft No. 1, 1983, pp. 18–19.

[51] See speech by General Secretary Honecker (note 42).

[52] See: Manfred Melzer, "Bemuehungen um effektiveren Kapitaleinsatz in der Volkswirtschaft der DDR," FS- Analysen der Forschungsstelle fuer gesamtdeutsche wirtschaftliche und soziale Fragen, No. 6, 1978.

[53] See the report by Politburo member Hermann Axen at the Fifth Session of the SED Central Committee, in: Neues Deutschland, November 26, 1982.

[54] See: "Anordnung zur Ueberpruefung und Ueberarbeitung der normativen Nutzungsdauer und der Abschreibungssaetze fuer Grundmittel," Gesetzblatt, Teil I, 1983, pp. 236ff.

It seems highly probable that the GDR investment policy for the 1980s, no doubt made necessary by the need to expand exports, will have a restrictive effect on the potential for future, sustained economic growth. It will apparently be impossible, under these conditions, for all branches to undertake many of the potentially growth-promoting projects available. It seems also most likely that the limited availability of investment funds will have a dampening effect on efforts to carry out the necessary structural modifications appropriate to modernization. Finally, limiting investment must have (and is actually having) the consequence of retarding the process of withdrawing old equipment from service, with the result that, at least to a degree, obsolete plant, which is both inefficient and subject to high repair costs, will continue to be used. Such a consequence can only work against the basic goal of increased productivity.

In the short run, this may not be so. That is, it is quite possible that long-standing inefficiencies might be overcome, particularly when examples from other countries can be emulated, without a thorough replacement of old capital with new. In the long run, however, despite the potentially great benefits from the use of robots, micro-technology and electronic data processing (all of which are given the status of near miracle-workers in much GDR economic literature), the GDR's efforts to improve capital productivity will succeed only if the existing outmoded and often ineffective plant is systematically replaced. For individual enterprises to execute this transformation is simply not possible, and to the extent they might try to do so on their own, the attending costs will be extremely high.

It seems certain, therefore, that the desired improvements in capital productivity while holding capital intensity at roughly current levels cannot succeed, beyond a limited degree. Intensification in labor and capital usage requires both new technologies and new plant and equipment. In the GDR, however, the development and operationalization of those technologies and the installation of appropriate capital has proceeded and—if current policy is retained—in the future will proceed at only a comparatively slow pace.

It was noted earlier that the modification of the economic structures (by replacing the previous middle level administrative units with Kombinate) to which the GDR leadership felt compelled to respond. Among the implications of this restructuring, several problem areas must have stood out (perhaps in order of their importance):

1. *Ministerial control.*—The Kombinate, as "closed systems of reproduction," assumed the properties of monopolies. While that no doubt improved the opportunities for taking advantage of the benefits resulting from "economies of scale," it also made the task of controlling them more difficult. Specifically, when inter-Kombinate cost and performance comparisons might be attempted from above, those units which might show up unfavorably in the comparison would invariably have a powerful argument in the fact of their uniqueness, particularly since monopolies also have a corner on expertise and information as to their own activities. Additionally, as monopolies, Kombinate also have leverage from their importance for the overall economic performance; thus, if Kombinate X pro-

duces all the autos or computers manufactured in the GDR, any sane minister, would be extremely careful to avoid any serious disruption of its production process, a fact which must surely be elementary (and very useful) to Kombinate General Directors. Hence, the system of Kombinate implies peculiar problems of control from above.

2. *Enterprise morale.*—It is quite clear that under the structural reform, the General Director and the Kombinate Directorate have been given substantially broader powers over their subordinate enterprises, than the VVBs had had. Though enterprise directors have certain specified rights, and exercise control over certain categories of funds, the fact is that they no longer play a major role in either defining their own tasks or in setting the amounts of resources they are to utilize. Given this relative dependency on the Kombinat level authority, the likelihood of high moral and motivation at the enterprise level—while nevertheless crucial to overall Plan fulfillment—has most probably been reduced.

3. *Increased uncertainties.*—Morale and motivation aside, the authority vested in the Kombinat General Director is so great vis-a-vis the individual enterprise that the enterprise Director must constantly fear his record of performance will depend upon the favorable decisions of his superiors. For example, enterprise plan fulfillment may well depend upon the tasks it has been assigned and the resources it has been allocated; should either be altered, and the Kombinat Directorate has the authority to make such changes, the enterprise may accordingly suffer or benefit, in either case because of arbitrary (not performance related) factors.

4. *Disfunctionalities of "Subsidies."*—The authority of the Kombinat General Director to allocate resources and production tasks may also have the effect of "subsidizing" or supporting an enterprise, even apart from its merits. For example, a certain enterprise might be given the task of producing a certain product for Kombinat use, which, because of internal cost and price relationships, brings an exceptional profit. Or, a General Director might decide to allocate the bulk of his available investment resources to a single enterprise, thus placing it at a relatively advantageous position within the Kombinat. In either case, the benefited unit is not as likely to strive for maximal performance as it might be, were it not particularly blessed with an "easy" Plan.

VI. THE RESPONSE: 1982-PRESENT

The problems just described were as diverse as they were serious. Taken together, however, they signified (or were taken to signify) that the previous results from the strategy for the 1980s were inadequate, or to put it more concretely, that intensification must proceed even more rapidly in the future. The correctness of the economic course begun was not questioned. Rather, specific adjustments were to be made which in a sense would "fine tune" the instrument itself.

Most, but not all, of this "fine tuning" took place in the area of "indirect steering," for example through the modification of the means by which profits were to be calculated and used, or adjustments of other financial control mechanisms. For that reason, the main focus of this section will be on indirect steering, though some other points will also be touched upon.

However, it would be incorrect to assume that the most recent reactions of the GDR leadership were so focused as to lose sight of their economic strategy in its broadest sense, or of the specific problems which might preclude performance success in the long run. Thus, before we examine the primary elements of the indirect steering mechanisms introduced, we will outline some of the leaders' additional and/or more general concerns which set the specific context for the refinements of 1982–1983.

One recurring problem for the central authorities was the need to deal with immediate crises. For example, when the USSR reduced its oil deliveries to CMEA members by 10% in 1982, GDR planners were forced to take appropriate steps to allocate the reduced supply of that vital product, and did so by setting a plan in motion which substantially modified the transport sector of the economy. (Allotments for diesel fuel for firm transport were drastically reduced, thus to force a reduction of trucking in favor of rail hauling.) More recently, GDR short term import needs and credit obligations reached a point where it was forced to seek (and to obtain) substantial new credits from the West, this time in the form of a loan from West German banks.

Such actions would have been necessary irrespective of the specific content of the economic strategy pursued by GDR authorities. They were perhaps most importantly connected with that strategy in that the problems confronted were stark evidence of the need for better economic performance in the future. That is, one major objective of GDR decision-makers was to create the economic conditions in which crises would not occur, or if they did, would not cause great internal disruptions.

A very different and this time system-related concern was the matter of balancing the increased prerogatives of the Kombinate with greater or more effective central controls. Given the enhanced position of the Kombinate General Directors, the central level leadership was in a sense forced to seek means to check such power concentrations with more precise and effective control devices, at least if it was to preserve the basic nature of a planned economy. It is fair to say that this concern prompted one of the main thrusts of the 1982–1983 modifications.

A third concern, which has until now been secondary, but which almost certainly will assume great importance in the immediate future, is the need for systemization of the entire mechanism. Coordinating and integrating a planned economy are extremely difficult in any case. With the GDR, however, the systemic modifications have been so swiftly introduced, so numerous, complex and comprehensive, that inconsistencies, ambiguities and simple confusion have necessarily been by-products. To the extent that they have been, the task of exercising central controls has obviously been made more difficult, and it is only a measure of the perceived need for greater refinements that they were undertaken at the price of creating a certain dis-equalibrium in the process.

In the context of these considerations, then, the GDR central authorities moved to improve the system of financial controls over the economy. After looking at one of these in a somewhat broader context, (price formation), we will examine the other most important elements.

A. Price Formation

In the GDR, as in all CPEs, the central determination of prices is made particularly difficult by two basic but conflicting imperatives. First, for planning and plan calculations, prices must be held relatively constant over the plan period, so that meaningful targets can be set and actual performance can subsequently be compared against them. On the other hand, however, it is also necessary to pay close attention to changes in value relationships which evolve over time, for otherwise the differences between official prices and "real" values will lead to disfunctionalities in production decisions and invalid evaluations of performance

The administrative determination of prices, to be sure, assumes that the central authorities can accurately calculate what "socially necessary" inputs are required for a given good, and that a valid price can be attached to it. Deviations from this principle are permissible only in cases where specific socio-political goals are to be pursued (e.g., when below cost prices are set for basic consumer goods). In GDR practice, however, industrial prices, which had been systematically adjusted during NES, were thereafter essentially unchanged until the mid-1970s. This no doubt facilitated the planning process, but it also meant that prices no longer reflected real costs.

The discrepancy between costs and prices became particularly acute when the world market prices for energy sources and raw materials exploded after 1973, for over the next years, world market price changes were reflected in intra-CMEA trade as well. Domestically, ever poorer geological conditions in the coal mining sector also had serious implications for prices. As a result, the GDR leadership was forced to introduce measured price increases internally, thus to induce reductions in raw material use. In 1976, prices for raw materials and raw material-intensive products were raised.[55] In 1977, prices were increased for semi-finished products; in 1978–1979, for finished goods. And in 1980, prices were again raised, not only on raw materials,[56] but also on semi-finished and finished goods, including selected, high demand consumer products.[57]

These 1980 price modifications were in part the result of a modified price policy.[58] Though prices for basic consumer goods and services were to remain unaltered, price increases for some consumer goods were sharply increased, especially when a new good was introduced which entailed a new price calculation.

In this regard, it is appropriate to illustrate the extreme ranges in retail prices which presently obtain in the GDR. For some basic goods such as bread, potatoes, meat, bakery goods or children's clothing (as well as such services as rent, bus and train fares, or dry-cleaning), the prices are kept well below cost through subsidies; in 1982, state subsidies for these basic items were said to total 21.4 billion Marks.[59] On the other side of the coin, however, "luxury" items such as color televisions, autos, tape recorders, wash machines or refrigerators are extremely expensive, and reflect a kind of sales tax. In between these two extremes are a wide variety of products for which in some cases prices are now to be set to cover costs. At the same time, prices for these "middle range" goods must be related in some sense to each other and to the goods at the upper and lower levels. The result is that some prices are set above and some below estimated actual costs.

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[55] Information is available on price increases for only a few items: electricity, 33-66%; natural gas, 200%; heating oil, 155%; hard coal, 90%; and, lignite coal, 50%.

[56] The price increases for raw materials averaged 22.5%.

[57] See: Manfred Melzer, "Wandlungen im Preissystem der DDR," (note 19).

[58] The new price policy was explained in Neues Deutschland (December 14, 1979) as follows: "Our price policy will increase the subsidies for basic goods, for services and for rent (in order to hold those prices constant). However, for new, valuable industrial consumer goods, the prices must cover their costs, as well as a normal return (profit).

At the beginning of 1981, new price increases were again introduced, this time for a broad range of products running from raw materials to finished goods. Similar increases were also effected in 1982 and 1983, though of course different specific product groups were affected each year. Finally, as of January, 1984, prices are to be increased again, for energy and fuels, certain raw materials, reusable by-products and semi-finished goods. An agricultural price reform is also to take effect at that time, which will apply the effective industrial prices to agriculture and thus will entail smaller state subsidies. However, since basic consumer goods' prices will not be raised, larger subsidies will be given to the food industry.

The price modifications just discussed have been upward adjustments. The purpose behind them has been clear: the new values were/are to better reflect the costs for raw materials as they are utilized in the production process, and more particularly, to induce reductions in material input intensity, especially if such inputs are imported. Also important is the goal of stimulating higher refinement of materials, particularly those which can be produced from domestic origin raw materials.

However, present GDR pricing policy has also been utilized to promote scientific and technological progress and/or innovation. Here, it should also be made clear, prices might also be reduced where appropriate. That is, in cases where new products are developed which required less in the way of factor inputs, prices are to be reduced after a certain period of time, so that profit levels will not be increased beyond acceptable levels for very long. Alternatively, prices for a given outmoded good might be reduced over time so as to induce the development of newer, (i.e., more profitable) replacements.

The pricing system for new and/or improved products which was in effect from 1976 to the end of 1983 was called "Price Performance Relationship." According to that scheme, prices for new/improved products were to be determined by comparing their utility against the existing products they were to replace or which were most similar. Increases in prices, however, were to be less than the increase in utility, for only 70% was to be for the benefit of the producer, while the remaining 30% was to accrue to the purchaser/user. The intent here, of course, was to make innovation advantages to both producer and user.

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[59] See: Horst Miethe and Gunnar Winkler, "Soziale Sicherheit: Wesenmerkmal unserer Gesellschaft," Einheit June, 1983, p. 525.

It is fair to say, however, that this price setting system necessarily had significant limitations. First, an objective measurement of utility was not possible, at least in many cases. This was particularly so, since second, the producer had an interest in presenting his product in the best possible light, by emphasizing its strengths and ignoring its limitations. Third, if objective measurement was (usually) not possible, objective comparisons would also be beyond achievement. Finally, in such a scheme, necessary costs of production must in also be accounted for in the final price decision, and they need have no particular relationship to utility.

To deal with these problems, the central authorities found themselves forced to direct the firms to make price and quality comparisons with goods on the world market, both for goods produced for export and also for goods incorporating technological innovation.[60] Additionally, since mid-1983, cost and price limits were to be set for such goods very early in the development process and must be approved by the appropriate central organs.[61] This was based on the idea that the world market price was to be the upper limit for acceptable costs in the development of new export products.

Because of these limitations in the "Price Performance Relationship" system just discussed, GDR authorities published an important modification of the pricing policy at the end of 1983.[62] Under this new regulation, the costs of producing new products (including the "cost" of the newly imposed Contribution to the Social Fund which will be discussed below), were given greater importance. That is, the idea of relative performance between old and new goods was down-graded if not dropped altogether. In addition, the regulations defined more sharply the category of costs which could not be included in price calculations (e.g., contract violations, sanctions, or costs for unauthorized labor usage). Finally, new products produced by particularly efficient means or with especially advantageous results (e.g., improved exportability) could be priced so as to provide an extra "profit," for three years, the level of which was to be determined on a case-by-case basis.

For products already in production at the beginning of 1984, prices were to remain at existing levels. This was to be the case until 1985 even when costs of production were reduced (e.g., through reductions in material inputs). For goods adjudged to merit the designation "high quality," a 2% price increase could be added, and for goods of such high quality as to be designated for "Exquisit" and "Delikat Laden," an additional above norm profit of 50% could be calculated into the price.[63] On the other hand, "obsolete" products which no longer possessed the quality norms in effect were subject to price reductions.

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[60] See: "Anordnung No. 2 ueber die Zentrale Staatliche Kalkulationsrichtlinie zur Bildung von Industriepreisen," Gesetzblatt, Teil I, 1978, pp. 336ff. Also, "Anordnung No. 3 ueber die Zentrale Staatliche Kalkulationsrichtlinie zur Bildung von Industriepreisen," Gesetzblatt, Teil I, 1979, pp. 119ff.

[61] "Anordnung Nr. Pr. 475 ueber Kosten—und Preisobergrenzen, "Gesetzblatt, Teil I, 1983, pp. 131ff.

[62] See: Kurt Ambree and Otto Koehler, "Sozialistische Intensivierung und Preisplanung," Wirtschaftswissenschaft, May, 1980, pp. 558ff.

[63] See: "Anordnung ueber die Zentrale Staatliche Kalkulationsrichtlinie zur Bildung von Industriepreisen," Gesetzblatt, Teil I, 1983, pp. 341ff.

The pricing systems used by the GDR in recent years have thus put great stress on the stimulation of innovation and intensification,[64] even (until very recently) to the point of reducing the role of cost recovery in price formation. Cost modifications, to a certain extent, have been taken into account, by increasing the prices of raw materials and semi-finished products and then passing them along in the production process. Such adjustments, however, have not overcome previous, long-standing price distortions, because cost increases have only been added to the existing, often distorted prices. Only entirely new calculations would suffice. Now, as before, fully different price calculating procedures continue to exist side by side (e.g., "fund-related" prices, as well as prices where capital costs are not taken into account).

More generally, defects in pricing (i.e., price distortions), to which we have referred at several points previously, result particularly from: (a) discrepancies between values assigned and the real costs of production inputs; (b) inconsistent and/or inadequate assessment of capital values; (c) uneven application of pricing principles, made possible in part by their subjectivity; and (d) under-valuation of labor inputs. Together, they doubtless have and will have the effect of reducing the likelihood that pricing policies can sufficiently induce the intended innovation and intensification sought by GDR authorities.

B. Profits

We noted earlier that during the NES period (1963–1970), profit was to be a major means of inducing "correct" economic behavior at the operational level, and an important measure of performance success. After the recentralization of 1970 and following, profit in this sense (i.e., as defined in market economies) ceased to be of importance. Nevertheless, the term was retained in GDR usage and became an administratively determined, residual, or a planned part of prices which accrued to the producing unit under specified conditions.

Until the beginning of the 1980s, such (planned) profits, together with credit, were the primary financial means with which enterprises and Kombinate met their operational needs. Exceeding the planned profit level, however, was of little interest to plant managers since, on the one hand, one half of such earnings was transferred to the state budget, and on the other, the opportunities for using the second half effectively was very limited since material balancing was the primary mechanism for the distribution of needed inputs. To be sure, under-fulfillment of the planned profit level, which ordinarily resulted from excessive costs or inadequate plan fulfillment, could lead to genuine difficulties for the units concerned. Consequently, production units had an interest in achieving planned profit levels, even if it meant manipulation of prices and the like.

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[64] See: "Anordnung Nr. Pr. 441 ueber die Preisbildung fuer Exquisiterzeugnisse," Gesetzblatt Teil I, 1984, pp. 106ff.

In 1982 and especially in 1983, GDR authorities cautiously moved to reform the role of profit in the steering process.[65] Here as elsewhere, the intent was to use profits as a stimulator of the intensification process.[66] However, profit was not made a primary objective for enterprises; rather, it was subordinated to the achievement of expanded production of export-directed and urgently needed goods. Specifically, profit was to be an expression of better or greater production results through more rational use of material and financial resources.[67]

To achieve this result from the profit-setting mechanism (and price distortions obstructed efficiency measurement here as elsewhere), enterprises were permitted to retain only those profits which resulted from "real" contributions to the economy. For example, profits which were earned by violating the norms as to price levels, production profiles, quality standards, or by exceeding labor use norms were transferred in their entirety to the state budget.

The decisive point, however, was that the enterprise or Kombinate could increase its net profit only with plan or overplan production, as well as through cost reductions. Thus, material-saving measures, rationalizations, reduced labor usage, more efficient production processes, all of which are important plan imperatives, have been tied to earned profits as well.

To strengthen those ties, net profit, beginning in January, 1984, is to be a basic norm by which plan performance is to be evaluated, along with net production, exports, and production for consumer needs. Since prices themselves are not particularly meaningful as efficiency measures, the intent here, besides that of increasing production as before, is to effect relative savings in cost over time. That is, cost savings have been made a decisive measure of performance, as reflected in earned profit.

Another modification in the use of profit concerns its allocation between enterprise and Kombinate. When the producing unit overfilfills its profit norm, it is to receive a relatively greater part for disposition into its own funds than is the Kombinate, especially when the profits result from increased or more profitable export performance. From this it is apparent that at present the state budget now ordinarily receives less than the previously set rate of 50% of the over Plan profit, and it is also the case now that enterprises have a slightly increased flexibility in the disposition of the earnings they have thus accrued.

When enterprises and Kombinate fail to earn their planned profit levels, they face not only financial difficulties; they also stand to be penalized in the formation of their several funds. In the case of over-plan costs, certain of their funds may be frozen. More generally cost planning has been given greater importance, as shown by the facts that (a) the cost limits per 100 Marks of production may no longer be exceeded, even if the product-mix has been modified; (b) cost reporting and an analysis especially to determine means of reducing excessive costs are now obligatory; and (c) Kombinate and enterprises must meet the annual reductions set in the Plan, particularly in energy and fuel, transport, marketing and repairs. In addition, plan fulfillment and successes in intensification are assessed for producing units and Kombinate in the comprehensive yearly process of performance assessment.[68]

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[65] See: "Verordnung ueber die weitere Vervollkommnung der Wirtschaftlichen Rechnungsfuehrung auf der Grundlage des Plannes," Gesetzblatt, Teil I, 1982, pp. 85ff.

[66] See: "Anordnung ueber die Finanzierungsrichtlinie fuer die Volkseigene Wirtschaft," Gesetzblatt, Teil I, 1983, pp. 110ff.

[67] Autorenkollektiv (Leitung: Herbert Finger und Werner Gerlich), Stimulierung in Industriebetrieben und Kombinaten, (East Berlin: Verlag der Wirtschaft, 1982) pp. 26-30.

Stricter rules are now being applied in the assessments for the state budget which are deducted from net profit. Whereas earlier it was possible to get a reduction in the assessment when net profit was below plan, now the full amount is to be deducted in any case. This modification was accompanied by a partial centralization of net profit into a Kombinate-level account, "Centralized Net Profit," from which the assessment just described is to be taken, and which is also to be allocated to a number of other funds. In any case, at present when net profit is too low to meet the assessment, the Kombinate must cover the levy from its other funds or must draw on its credit from the bank. For their part, the banks can even unilaterally reduce the account of the enterprises or Kombinate by the full amount of the assessment when the payment deadlines are not met.

Similarly motivated, more rigorous control measures were also adopted for the levy on the production fund: [69] where investment projects were not to have been completed within the (annual) plan period, the assessment made against this fund is for the planned investment in any case. Thus, if less than planned investment is committed, the unit is penalized; if more, the unit is rewarded. The idea is that earlier than planned completion is to be induced. And, where projects actually fall behind schedule, or when a unit's given capacities are not utilized for the planned number of hours per day, the assessment is then to be doubled.

C. Funds

The several funds which are the financial means through which the Kombinate and enterprises conduct their activities,[70] (all according to laws and regulations), are created by rather complex formulae from their profit as well as from that part of their sales revenues which is classified as costs. Some of these funds are under the jurisdiction of the Kombinate leadership; some are under the control of the enterprises; and, some are created at both the Kombinate and enterprise level. Each of them is covered by specific regulations with the intent that the fund in question be utilized in a manner consistent with centrally determined policy.

For our purposes, two funds deserve particular attention, since they are especially directed to stimulate technological progress and efficiency. The first, the Premium Fund,[71] is to promote better performance through direct material reward to the workers when their efforts result in production success and/or in exceptional achievement in intensification. The "End of the Year Bonus," for example, comes from this fund, as do special premiums to individual workers. Since the "End of the Year Bonus" has become a nearly standard payment to all, it has been frozen for those presently receiving more than 800 Marks, and will increase to only 800 for those presently receiving less. Recently, greater attention has been given to using the fund more to reward specific individuals whose accomplishments are truly exceptional.

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[68] "Verordnung ueber die Jahresrechenschaftslegung in der Volkseigenen Wirtschaft," Gesetzblatt, Teil I, 1983, pp. 193ff.

[69] "Verordnung ueber die Produktionsfondsabgabe," Gesetzblatt, Teil I. 1983, pp. 106ff.

[70] In sum, there are approximately 15 funds, which are disposed of at either the Kombinate or Betrieb level.

[71] See: "Verordnung ueber die Planung, Bildung, und Verwendung des Praemienfonds fuer Volkseigene Betriebe," Gesetzblatt, Teil I, 1982, pp. 595ff. See also: "Erste Durchfuehrungsbestimmung zur Verordnung ueber die Planung, Bildung, und Verwendung des Praemienfonds fuer Volkseigene Betriebe," Gesetzblatt, Teil I, 1982, pp. 598ff.

The second, the Performance Fund,[72] is directed toward inducing an above Plan profit, both through production increases and through greater intensification. At least one quarter of the Performance Fund, which is formed from profit above the plan, is to be utilized for planned rationalization efforts, while the rest is to go to finance internally conceived means of rationalization "out of reserves," as well as improvements in working and living conditions of the labor force (e.g., through support for efforts to improve the living conditions of shift workers, or subsidies for the building of employees' housing).

D. Banks and Credit

Finally, brief note should be taken of the role of credit and the part banks play in granting or denying it to Kombinate and enterprises. Here too, the intent has been to strengthen or sharpen the control mechanisms, and thus to stimulate efficiencies and intensification.

The specific tool utilized by the banks here is the adjustment of the interest rate assessed.[73] Loans for purposes consistent with the Plan and which result in performance and efficiencies as foreseen at the time the credit was granted carry an interest rate of five percent. In particular cases where exceptional, above Plan improvements are achieved, (e.g., by sooner than planned completion of a project, investment leading to high material savings, or better than expected export results), the rate may be lowered to 1.8%. On the other hand, where expected improvements have not been realized, the rate may be raised to 8%. Similarly, above plan borrowing (with up to 8% interest) will be permitted by the bank only when the borrowing unit has taken specified steps to improve performance (i.e., to bring it into conformity with its plan). Finally, when a firm fails to live up to its loan agreement, the interest rate assessed is to rise to 12%.

The control functions of banks extend beyond the granting of credit at varying interest rates, to a general overseeing authority to promote innovation, export expansion and intensification. Their influence and even participation in the planning process is so broad that enterprise and Kombinate proposals for greater efficiency measures, production increases, etc., must be submitted to them for approval. Additionally, they also participate in the periodic overall performance assessments of the production units which are made at higher levels. In such sessions, the banks may insist on steps to be taken by the enterprise to eliminate waste or to improve performance in particular ways.

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[72] "Anordnung ueber die Planung, Bildung und Verwendung des Leistungsfonds der volkseigenen Betriebe," Gesetzblatt, Teil I, 1983, pp. 121ff.

[73] See: "Verordnung ueber die Kreditgewaehrung und die Bankkontrolle der sozialistischen Wirtschaft—Kreditverordnung" Gesetzblatt, Teil I, 1982, pp. 126ff.

E. The Contribution to the Public Social Fund

One of the more dramatic recent modifications in the control mechanisms now to be used in the GDR is the levying of a "Contribution to the Public Social Fund" which, beginning on January 1, 1984, is to be made by all centrally directed producing units in the industrial sector. (The constructions sector is to be so levied beginning one year later). This "contribution" is in fact a surtax on labor usage, and a large one at that, for the affected units are to pay a sum equal to 70% of their labor costs into the state budget.[74]

The rationale stated in the legislation suggests that the fee is to be seen as a kind of withholding from the salaries of the workers to cover, at least in part, the ever increasing costs of subsidies and services provided by the state. Although that may have been a consideration, it could hardly have been decisive, for the leadership could have made any number of adjustments in its system of financial planning to the same end. Probably more important is the fact that since disposable personal income is not increasing notably at present, it is politically important to stress that the increases in welfare benefits which are provided without charge are in fact a form of salary. That is, the labor force is encouraged to see this as a part of its earnings which is to cover the costs of schools, housing, hospitals, and the like.

The real purpose, however, is doubtless something different, to force efficiencies, this time in labor utilization. At one fell swoop, labor costs (assuming usage is constant) will be raised by 70%, surely a dramatic way to encourage its more frugal use, as well as the transfer of workers to more productive tasks. Additionally, the levy will also have the effect of siphoning off profits from production which overall, have increased recently. At the same time, the levy has the advantage of simplicity: if labor costs were to be increased through wage and salary increases, consumer prices would also have to be adjusted to keep a relative balance between the supply of goods and effective consumer demand. Judging from the experience of other Socialist countries, such adjustments would not only be difficult to effect administratively, but might also lead to serious negative political consequences.

Perhaps the most surprising feature of the regulations is the size of the mandated levy. For many a producing unit, the sudden escalation of the cost of labor by nearly ¾ths will create an untenable situation. For that reason, the GDR State Planning Commission simultaneously issued an implementing regulation, which was supplemented by a second about one month later. These additions provided, interalia, that when a producing unit or Kombinate has insufficient net profit to cover the levy (as well as other obligatory contributions), it would be eligible to receive a state subsidy, which was not to exceed an amount equal to that of the maximum permitted normal net profit.[75]

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[74] "Verordnung ueber den Beitrag fuer gesellschaftliche Fonds," Gesetzblatt, Teil I, 1983, pp. 105ff. Also, "Erste Durchfuehrungsbestimmung zur Verordnung ueber den Beitrag fuer gesellschaftliche Fonds," Gesetzblatt, Teil I, 1983, p. 106.

The manner in which this levy on labor would be related to prices was not immediately evident, but with the price policy modification of late 1983, discussed above, a clarification was forthcoming. At present, the prices for new products are to be so calculated as to take the levy into account. Products already in production will ordinarily retain their prices, as noted above, while the levy on their labor input will be in full force. Thus, the net result of this emendation is to provide one more incentive for producing units to introduce new (and better) products into their production profiles. Only in that case would at least part of the "tax" be covered by higher prices.

Beyond that, the impact of the regulations must be assessed with caution until more evidence is available. Clearly, if the potential subsidies actually made available are large enough, or if the price increases are high enough, the levy will have no net effect. At the other extreme, if no such subsidy is made available or if the price increases are minimal, affected units might well be unable to cover the levy. It is also true that the levy will be uneven in its impact, even between firms which are equally successful in their overall performance; the subsidy permits adjustments for this variation.

Apparently, the planners intend something in between the two extremes: increased pressure to save on labor costs (while not disturbing the remaining mechanisms unduly), while limiting that pressure enough so that the demands will be seen as reasonable. And through it all, the uncertainties of price reviews and subsidy application procedures will be heightened, and the opportunities to increase the norms for the producing units will be plenteous.

With these refinements of the monetary mechanisms, the GDR leadership sought in one more way to bring about performance increases, export expansion and intensification. The specific elements involved were several: pricing, credit and interest rate manipulation, cost and profit calculations, fund formation, and levies and premiums.

Particularly important in this was the role envisioned for profit. On the one hand, a producing unit could increase its profit only through improved performance and cost reductions. But on the other hand, the part of profit which in the end could be retained was to be reduced (even until nothing was left) under the provisions covering the contribution to the public social fund. Taken together, this two-pronged thrust of the policy on profit seems certain to put great pressure on each of the enterprises and Kombinate in the GDR to strive for the specific performance results demanded from above.

As of this writing, it is too early to judge how these several changes in indirect steering will be applied in actual practice and with what effect. Even an overall assessment and prediction of what lies immediately for the GDR must be very tentative. Nevertheless, such a general evaluation and summary must be made, to which we now turn.

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[75] See: "Anordnung ueber die Planung and Zufuerhrung des staatlichen Erloeszuschlages," Gesetzblatt, Teil I, 1983, pp. 164-165.

VII. CONCLUSION

As described above, the GDR, since the late 1970s, has embarked on an ambitious economic strategy which will most probably be continued for the foreseeable future. According to this strategy, economic growth is to be sustained, despite the accumulation of serious difficulties and very unfavorable circumstances, and by means which are either new or were insufficiently utilized in the past. The means, which include primary reliance on scientific and technological progress, more frugal use of factor imputs, and therefore growth through improved productivity, were to bring about greater intensification.

These objectives and means were not seen as incompatible with the basic character of the economic system itself. That is, central planning and direction of the economy were to be retained. Only "within system" changes were to be introduced, and as we have described above, such modifications have been manifold and comprehensive, extending from organizational as well as structural alterations, to changes in planning methods and finally, to new and refined mechanisms for financial/monetary controls.

From this it follows that the possibilities for success or failure in this experiment will, first of all be "system determined." This is not the place to undertake a discourse on the advantages and disadvantages of CPEs; the literature on that subject is vast and well known. Nevertheless, it is appropriate to note that CPEs are not (or at least have not been) innovation and efficiency prone, and it is fair to expect the systemic properties of the GDR economy to work at cross purposes with the strategy, at least to some extent.

In the case of the GDR, the system-inherent problems which seem particularly serious are:

a. Identifying "real" or actual costs of the factors of production and relating them to each other. Since values are administratively set using various procedures and criteria, noone can say what can bring the most benefit among the limited available alternatives. At best, distortions can be reduced and/or prices improved.

b. Stimulating efficient and innovative performance at the enterprise level. Western observers have rightly stressed the point that CPEs, with their emphasis on directions from above and compliance from below, tend to restrict the opportunities for innovation at the operational level and, more generally, have difficulties motivating their workers. These problems are no doubt real in the GDR, and are made even more serious as a result of the scarcity of investment funds and (despite the goals of the Five Year Plan), the essentially frozen wage levels. Because investment possibilities are so tightly controlled, ideas for innovation too often cannot be tried. And since particularly effective efforts cannot be much rewarded (materially), the likelihood of perfunctory performance from many in the labor force would seem to be increased.

The success of the GDR experiment will also depend upon the aptness of the strategy itself and on the internal consistency of its several components. Here, four problems seem most important:

a. As noted above, the very complexity of the system and the rapidity with which the elements were introduced without adequate steps to integrate the parts into a viable whole have necessrily created confusion. To the extent that is the case, lower level (i.e., enterprise and Kombinat) heads will have the opportunity to protect or enhance their interests, even to the point of thwarting centrally determined priorities.

b. The strategy places a relatively one-sided emphasis on negative incentives, while positive rewards are correspondingly undervalued. Neither wage, research and development, nor investment outlays may be expanded very much, but above plan expenditures will result in real penalties for the offending units. Profits are not easily earned, and even if they are, they may nevertheless be taken away. Though GDR leaders perhaps feel they have no alternative, they may well be over-stressing the stick and forgetting the carrot.

c. The strategy of promoting greater scientific and technological progress would seem to require increased outlays for investment. Yet, again perhaps because such resources are simply not available, the plan is for relatively lower, or at best constant investment levels, a policy GDR planners must know is not advisable in the long run.

d. Finally, the strategy would appear to imply potentially serious problems in achieving optimal utilization of labor. As a by-product of scientific technological progress, workers will have to be transferred and/or retrained; greater reliance on automation may bring at least temporary unemployment or under utilization of labor. Already some marginal unemployment is said to exist in isolated rural areas, and as noted earlier, the price paid for the policy of full employment is some discrepancy between jobs held and qualifications learned. The paradox here is that the proper (i.e., maximal) utilization of labor becomes increasingly difficult as the economy undergoes the process of transformation.

Finally, the GDR strategy will succeed or fail in part as external conditions impinge upon the domestic economy. That is, through no fault of its provisions or properties, the intensification-oriented program of the GDR leadership may or may not be achieved as world market prices rise or fall, as East-West political relations improve or deteriorate, or as scientific and technological progress evolves in other countries. The GDR is highly dependent on international trade and stands to benefit or to be negatively affected by external political and economic developments. Even so, it seems clear that the potential for adverse developments in the outside world is greater than the reverse. That is, the best one might hope for there is somewhat reduced international political tensions, lower interest rates and stable prices on the world market—all of which would do little to eliminate the GDR external debt.

Given this catalog of difficulties, real and potential, there might seem little reason to be optimistic about GDR economic prospects or laudatory about its economic strategy for the 1980s. In an absolute sense, that is no doubt true, at least for the most part. The GDR will not overcome its hardships and problems in the short or middle run. Shortages in desired consumer goods will remain, product quality will too often continue to be inferior. And the most advanced Western countries will not be overtaken. In fact, the 1981-1985 Plan targets clearly will not be met, and by a considerable margin.

But in a relative sense, the GDR leaders have conceived and begun to implement a system under incredibly difficult circumstances which has some real chance of "succeeding." By success, we mean some growth to be sure. But even more important, growth by intensive means. The results of the first three years of the current plan period are perhaps most impressive because they show that cost reductions, productivity gains, and scientific and technological progress are possible with the current GDR strategy, despite their catalog of woes. It would therefore not be surprising if Soviet and other East European planners were to consider the GDR experience carefully as they seek solutions to their own problems.

TABLE I.—KEY 5-YEAR PLAN TARGETS, 1976–80 AND 1981–85; 5-YEAR AND ANNUAL FULFILLMENT RESULTS, 1976–80

[In percent increase]

	Plan 1976–80	Results—						Plan 1981–85
		1976	1977	1978	1979	1980	1976–80	
Produced national income	27.9	3.6	5.2	3.6	3.7	4.2	22	28
Industrial goods production	34.0	5.9	4.6	5.0	4.8	4.7	28	31
Retail trade	21.5	4.6	4.4	3.4	3.5	4.3	22	20

Sources: Plan—1976–80: Gesetzblatt, Teil I, 1976, pp. 519ff; 1981–85: Gesetzblatt, Teil I, 1981, pp. 405ff.
Fulfillment—1976–80: Report of the General Secretary to the 10th SED Party Congress, in Neues Deutschland, April 12, 1981.
1976: Neues Deutschland, January 22 and 23, 1977.
1977: Neues Deutschland, January 12, 1978.
1978: Neues Deutschland, January 19, 1979.
1979: Neues Deutschland, January 17, 1980.
1980: Neues Deutschland, January 17 and 18, 1981.

TABLE II.—KEY ANNUAL PLAN TARGETS AND FULFILLMENT RESULTS: 1981–84

[In percent increase over previous year]

	1981		1982		1983		1984
	Plan	Result	Plan	Result	Plan	Result	Plan
Produced national income	5.0	4.8	4.8	2.5	4.2	4.4	4.4
Industrial goods production	5.1	5.1	4.6	3.6	3.8	4.1	3.8
Retail trade	4.0	2.5	4.0	1.0	3.0	0.5	2.2
Foreign trade	16.1	10.7	15.0	9.2	13.0	12.0	5.0

Sources: Plan targets: 1981, Gesetzblatt, Teil I, 1980, pp. 353ff; 1982, Gesetzblatt, Teil I, 1981, pp. 416ff; 1983, Gesetzblatt, Teil I, 1982, pp. 623ff; 1984, Gesetzblatt, Teil I, 1983, pp. 317ff.

Plan fulfillment: 1981, Neues Deutschland, January 16 and 17, 1982; 1982, Neues Deutschland, January 15 and 16, 1983; 1983, Neues Deutschland, January 19, 1984.

TABLE III.—INDUSTRIAL KOMBINATE IN THE GDR [1]

[Number, share of industrial production, share of industrial labor force]

	Centrally directed [2]			Regionally directed [3]		
	Number	Production (percent)	Labor force (percent)	Number	Production (percent)	Labor force (percent)
1970	35	33	33			
1975	45	43	36			
1978	54	49	45			

TABLE III.—INDUSTRIAL KOMBINATE IN THE GDR [1]—Continued

[Number, share of industrial production, share of industrial labor force]

	Centrally directed [2]			Regionally directed [2]		
	Number	Production (percent)	Labor force (percent)	Number	Production (percent)	Labor force (percent)
1979	101	85	88			
1980	130	99	98			
1981	133	100	99	93	94	92
1982	133	100	98	93	94	93

[1] Not included are Kombinate in the construction sector. Since 1981, they numbered an additional 24.

[2] The percentages of production and labor force are for centrally directed industrial production in the first case, and regionally directed industrial production in the second.

Source: Statistical Yearbook, 1982, p. 129; Statistisches Taschenbuch, 1983, p. 49.

TABLE IV.—AVERAGE WORLD MARKET AND GDR IMPORT PRICES FOR OIL: 1980–83

[In transferable rubles per ton]

	1980	1981	1982	1983	(Estimated)
World market price	137.9	173.2	183.7	156.7	
GDR import price	75	92	139	135	[1] (171)
(Percent increase)		23	52	−3	(23)

[1] The figures in parentheses are calculated on the basis of the average world market price for the previous three (rather than five) years. According to Dr. Bethkenhagen of the West Berlin Deutsches Institut fuer Wirtschaftsforschung, the three year average is apparently now being used.

Source: "Erdoel und Erdgas in RGW-Intrablockhandel" DIW Wochenbericht 51/52, 1983, pp. 624–632.

TABLE V.—GDR–OECD AND GDR–FRG TRADE, 1980–82

[Percentage increase over previous year in current prices]

	1980	1981	1982
GDR–OECD Trade:			
GDR imports	10.6	−2.9	−3.6
GDR exports	26.6	31.2	20.4
GDR–FRG Trade:			
GDR imports	12.1	5.3	14.5
GDR exports	21.6	8.4	9.7

These figures must be presented separately because: The GDR does not make such data available, and both the FRG and OECD consider GDR–FRG trade as a special case. The relative importance of the two sets of trade relationships is about 55 percent for the Federal Republic, and 45 percent for the other OECD partners.

Source: Calculated from data held at the Deutsches Institut fuer Wirtschaftsforschung, West Berlin.

TABLE VI.—CONSUMER WELFARE: SELECTED INDICATORS

	1970	1975	1977	1978	1979	1980	1981	1982
a. Supply of Selected Durable Consumer Goods (Per 100 families)								
Autos	15.6	26.2	31.6	34.1	36.3	36.8	39.0	40.0
Refrigerators	56.4	84.7	94.6	98.6	99.0	99.0	99.0	99.0
Wash machines	53.6	73.0	77.6	78.8	79.9	80.4	83.4	83.8
Television sets	69.1	81.6	85.1	86.5	88.0	88.1	89.2	89.7

TABLE VI.—CONSUMER WELFARE: SELECTED INDICATORS—Continued

b. Per Person Consumption of Selected Food Items
(Annually, in kilograms)

	1970	1975	1977	1978	1979	1980	1981	1982
Meat	66.1	77.8	83.5	86.1	87.8	89.5	90.5	91.0
Fresh vegetables	61.3	60.9	61.7	62.4	64.3	64.3	59.2	63.4
Fresh fruits	34.4	32.4	30.7	28.0	34.6	37.1	27.1	31.8

c. State Subsidies for Social Services
(In billion marks)

	1975	1976	1977	1978	1979	1980	1981	1982
Housing (including rent)	3.6	4.4	5.3	5.9	6.5	7.0	8.2	8.8
Stable prices for necessities	11.2	13.1	13.7	14.2	15.7	16.9	20.3	21.4
Education	7.7	8.3	8.6	8.9	9.0	9.2	9.9	10.3
Health	3.0	3.2	3.0	3.0	3.0	3.0	3.3	3.6
Pensions, sick and maternity leave	9.5	10.0	11.9	12.2	12.5	14.2	13.9	14.7
Sport, recreation, and culture	1.9	2.0	2.1	2.2	2.3	2.2	2.4	2.6
Other	.1	.1	.2	.2	.2	.2	.2	.2
Total	37.0	42.1	44.8	46.6	49.2	52.7	58.2	61.6

Sources: GDR Statistical Yearbook, 1982: pp. 247, 277, 278; Statistisches Taschenbuch, 1983: pp. 105, 113, 115.

TABLE VII.—GDR LABOR FORCE TRENDS: 1978–85

[Persons employed and net increases over previous year]

	1978	1979	1980	1981	1982	1983[1]	1984[1]	1985[1]
Working age population (millions)	10.42	10.52	10.58	10.62	10.69	[2] 10.76	[2] 10.82	[2] 10.85
Persons employed (millions)	8.12	8.18	8.23	8.30	8.37	[3] 8.41	[3] 8.46	[3] 8.48
Net increase (thousands)		60.00	50.00	70.00	70.00	40.00	50.00	20.00

[1] Estimated.

[2] Calculated by taking the number from the previous year, adding the number of young people who will enter the labor force that year, and subtracting the number of persons entering retirement age and the number of persons of working age who will probably die that year. The actual 1980 figures on the number of deaths were used to estimate likely deaths for 1983–85.

[3] The labor force was calculated by using the mean percentage of the working age population actually employed during the previous seven years (78.2 percent), and determining 78.2 percent of the estimated working age population.

Source: GDR Statistical Yearbook, 1983.

TABLE VIII.—GDR FIXED ASSETS: 1975–85

[In billion marks, 1966 prices]

	1975	1980[1]	1981[1]	1982[1]	1985[1]
Basic materials and energy	137,0	184,3	195,7	205,5	238,6
Investment goods	48,8	64,6	69,1	73,8	86,7
Consumer goods	27,4	35,3	37,0	38,1	42,4
Foodstuffs	16,1	21,3	22,4	23,1	25,6
Total industry	229,3	305,5	324,3	340,5	393,3

[1] Estimated.

Source: Statistisches Jahrbuch der DDR 1977 and 1982; estimation by DIW.

FRG–GDR ECONOMIC RELATIONS

By John Garland*

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OVERVIEW

Inter-German trade has increased sharply since 1980, to a point at which the Federal Republic of Germany (FRG) accounts for more than 60% of the German Democratic Republic's (GDR) trade with the West. This development reflects a reversal, due to severe economic pressures, of East Germany's trade strategy during the 1960s and 1970s—a strategy which, mainly for political reasons, was aimed at preventing excessive dependence on the FRG as a trading partner.

For the GDR, four factors in particular necessitated the redirection of trade towards the FRG. First, the GDR had to reduce sharply its imports from Western countries other than West Germany, in order to gain control over its hard-currency indebtedness. By shifting the source of imports from other Western to West German suppliers, the GDR could continue importing from the West without spending hard currency, since inter-German trade is conducted in a clearing unit of account. Second, the GDR's terms of trade with the Soviet Union have seriously deteriorated, leading to unsustainable East German deficits in the bilaterally balanced trade. This forced the GDR to look elsewhere to compensate for reduced supplies of raw materials and energy from the Soviet Union. Third, in common with all of Eastern Europe but in spite of quite notable economic performance compared with that of its CMEA neighbors, the GDR has had to introduce severe austerity measures domestically in view of essentially system-induced declines in growth. Trade with the FRG helps to alleviate the emerging bottlenecks. Fourth, the FRG is willing to succor the GDR by extending unilateral economic benefits in the hope of gaining political concessions in return, and by strengthening the very special status of inter-German trade, which exempts the GDR from the restrictive practices normally applied to foreign trade.

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The special status of inter-German trade, which derives from the constitutionally entrenched principle of the FRG that the GDR is not a foreign country, exempts imports from the GDR from normal tariffs, duties, and agricultural levies. An interest-free overdraft facility, originally intended to prevent trade flow interruptions caused by imbalances in the bilaterally-balanced trade, has in fact served mainly as an interest-free credit of substantial proportions for the GDR. West German firms participating in the two-way trade are granted preferential tax treatment. There are also substantial transfers of hard currency to the GDR, totalling over 3 billion DM ($1.2 billion) per year, outside the normal flow of trade and commerce. Such transfers are roughly equally divided between public fund transfers (mainly for preserving access to Berlin and for economic services rendered to West Berlin by the GDR, such as trash and sewage disposal) and private transfers (mainly for visa fees, currency exchange requirements for visitors to the GDR, hard-currency shop receipts, and gifts).

While the economic benefits of inter-German trade are clearly asymmetric in favor of the GDR, for the FRG the trade is of greater political importance. Though the GDR deftly exploits the sui generis nature of inter-German trade, it strictly rejects the principle of "one nation" on which the special status of that trade is based. Over the long run, however, the FRG has been able, however painstakingly, to link that trade to increased contacts between citizens of the two states, to humanitarian concern for persons living in the GDR, and to guaranteed access to the city of West Berlin. Such political considerations prevail in the FRG, and economic considerations in the GDR, in the formulation of the respective policies on the mutual trade. In a larger context, the FRG holds that improved relations with the GDR are both dependent on and conducive to an eventual pan-European solution to "the German question." This has been a major factor in West Germany's treaties with the Soviet Union and Poland in 1970, and a driving force of its current efforts to reduce tension between the two superpowers.

Inter-German trade may be expected to maintain its relatively high level throughout the decade, but the rapid growth of trade which characterized the 1980–83 period will surely lose much of its impetus. The extent to which the increase of inter-German trade can be sustained will depend in large part on the continuation of the forces that underlie it. During 1983 East German contacts with other Western countries (notably Austria, France, and Canada) suggest that trade with Western countries other than the FRG will pick up once the hard-currency crisis is under control. Yet GDR austerity measures have led to a sharp cutback of capital investment, which potentially means reduced competitiveness on Western markets. If so, the GDR will again towards the end of the decade be forced to redirect its Western trade to the FRG. Then, as now, the FRG is expected to help the GDR weather the storm.

I. INTRODUCTION

The decade of the 1980's has begun with a rapid surge of trade between East and West Germany. This is due in part to the special status of inter-German economic relations, which has permitted the GDR to circumvent many of the constraints which limit the growth of East-West trade in general. Economic relations between the two German states are an extremely sensitive issue politically, and both sides tend to play down their significance. The economic benefits of the bilateral trade are asymmetric in favor of the GDR, and the FRG has used that trade to gain political concessions. The GDR would gladly reduce such influences, were it not for the pressing economic problems which the two-way trade and economic relations help alleviate. Seriously deteriorating terms of trade with the Soviet Union, the inability of other CMEA states to respond adequately to GDR needs, a forced reduction of trade with Western countries other than the FRG, a substantial slowing of investment growth, and general difficulties in making the technological shift to the new electronics-based industries—all of these contributed to the GDR's decision in the early 1980's to become more, rather than less, dependent on the FRG.

This paper describes the special status of FRG–GDR economic relations; analyzes the turnover, structure, and prospects of inter-German clearing trade; explores the nature and scope of unilateral hard-currency flows to the GDR outside the normal flow of trade and commerce; and briefly discusses the political context of inter-German trade and economic relations. One will find in the appendix two related topics, one on the interest-free swing credits and the other on the EEC's position vis-a-vis the special status of inter-German trade.

II. THE SPECIAL STATUS OF FRG–GDR ECONOMIC RELATIONS

The special status of economic relations between East and West Germany derives essentially from the constitutionally entrenched principle of the FRG that the GDR is not a foreign country.[1] Commerce between the two is therefore not subject to West German regulations governing foreign trade. On the other hand, regulations governing purely domestic commerce clearly do not apply. The consequence is a uniquely ambivalent relationship characterized by special regulations, preferential treatment, and a network of highly politicized contractual agreements outside the normal flow of trade and commerce.

The GDR's position also is ambivalent. Because of the economic advantages, it accepts the sui generis nature of economic relations with the FRG. Politically, however, it strictly rejects any notion of special relations between the two states. Reconciliation of these ambiguities was somewhat achieved in the Basic Treaty of December 21, 1972, in which the existence of two German states but only one German nation was recognized. That did not affect the special status of trade relations between the two countries, however, for the Treaty provided for the continuation of bilateral trade "on the basis of existing agreements". Those agreements establish the institutional framework of trade between the two countries, reinforce the preferential treatment given by the FRG to inter-German trade, and provide for a very substantial, contractually-based financial flow to the GDR outside the trade accounts per se.

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[1] Officially, the FRG describes the bilateral relationship in terms of "intra-German trade," "deliveries," and "supplies." Here, in order to avoid unintended political connotations and in keeping with economic reality, the terms "inter-German trade," "exports," and "imports" are used. East and West Berlin are included in the data presented.

A. The Institutional Framework

The institutional framework of inter-German trade was established in the Interzonal Trade Agreement of September 20, 1951. This so-called "Berlin Agreement" was signed by each side for its respective currency area, i.e., the D-mark and East mark areas. The currency area clause was crucial, for it permitted the inclusion of Berlin (technically belonging to neither state) and the circumvention of the issue of officially recognizing the GDR. The Berlin Agreement, marginally revised over the years, contains the following major provisions concerning the exchange of goods, services, and payments:

1. Contracts for the two-way trade in goods and services are concluded on the basis of West D-marks, but payments are made in a clearing unit of account (Verrechnungseinheit, or VE), which is equivalent to the D-mark but of use only in trade between the two countries.[2]
2. All payments are effected exclusively through the two national banks; unlike usual practice in foreign trade, there is no transfer of payments between buyers and sellers. Claims of West German exporters, for example, are satisfied through the West German Bundesbank out of incoming payments by West German importers. That takes place in D-marks, although no D-marks are generally received from the GDR.[3]
3. Inter-German trade is essentially a bilateral balancing conducted on the basis of clearing units (VE); i.e., deliveries in both directions must balance in the long run. To prevent trade flow interruptions caused by temporary imbalances in the accounts, in 1949 the "swing" was established—an interest-free overdraft facility to be used by either partner. Were it not for

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[2] There is thus no exchange rate established between the two marks, nor any indication of the relative purchasing power of the two currencies. The conversion of the VE to East marks is an internal affair of East German authorities. It is important to note, because of widespread misinterpretations to the contrary, that the system is clearly not based on a 1:1 equivalence of the D-mark and East mark.

[3] The Bundesbank has established subsidiary accounts for this purpose: accounts I and II for goods, and III for services. Account I is for "hard" commodities (e.g., steel and iron, mining and engineering products), which normally are subject to value limitations. Account II is for "soft" commodities (e.g., consumer goods), which in principle but not in practice are not subject to limitations. Since 1958 there has also been a special "S" account, which offers the GDR the rarely used but additional possibility of making specified purchases outside the clearing accounts, i.e., against cash payments of D-marks. During the first 20 years, through 1975, the GDR spent no more than 1 billion DM in total through this account; it apparently was not used again until 1982, when the GDR paid around 60 million DM for imports outside the VE accounts.

subsequent developments, there would be nothing unusual about this. It is customary in any bilateral exchange that the banks of the participating countries extend technical credits to guarantee the reciprocal flow of payments despite inevitable temporary imbalances in trade accounts. Such credits allow either partner to purchase from the other without immediately selling goods of equivalent value. In the case of inter-German trade, however, this original function of the swing has long been anachronistic. Instead, the swing has served as a virtually permanent interest-free credit facility for the GDR, which is thus spared substantial interest payments on commercial bank and supplier credits. (See Appendix I, p.20, for how this functional change came about.)

4. In the FRG, all trade with the GDR is subject to special licensing, tendering, and other restrictive procedures. In principle, all trade with the GDR is forbidden which is not explicity approved. In practice, some commodities receive general approval, some require ad hoc approval on a case-by-case basis, and some are subject to stringent quotas.

B. Preferential Treatment of Trade With the GDR

Because inter-German trade is not viewed by the FRG as foreign trade, it is exempt from normal trade regulations. Specifically, GDR intermediate and manufactured goods enter the FRG duty-free, GDR agricultural exports to the FRG are exempted from EEC compensatory levies, and West German exporters and importers in the bilateral trade are granted preferential tax treatment. The EEC approved these special arrangements when it was founded in 1958, at a time when no founding member officially recognized the GDR. Especially since 1972, when the FRG recognized the GDR as a separate state in the Basic Treaty, there have been increasing complaints by some EEC representatives about alleged misuses of the special status of inter-German trade. (See Appendix II, p. 204, for an analysis of the issues involved.)

C. Contractual and Other Non-Trade Related Financial Flows to the GDR

Outside the bilateral clearing trade based on the Berlin Agreement, and besides the preferential treatment accorded inter-German trade by the FRG, a large number of specific contractual agreements have been concluded between the two countries, leading to a very substantial inflow of DM hard currency to the GDR. These public payments are supplemented by equally substantial private DM inflows.

The main public sources of DM transfers to the GDR are the FRG federal budget (mainly for transit fees and investments in East German roads, railroads and canals linking the FRG to Berlin), the West Berlin budget (mainly for GDR services in disposing trash, sewage, and construction debris), and the West German Post Office. Some of these payments are for economic services rendered by the GDR (such as West Berlin trash disposal), some are purely politically based (such as the ransoming of political prisoners), but most are somewhere in between (such as the FRG's investments in building autobahns between West Berlin and the FRG).

The main private sources of DM payments to the GDR are the mandatory currency exchanges for visitors to the GDR, visa and transit fees, foreign currency shop receipts, and private gifts.

III. FRG–GDR CLEARING TRADE

The decade of the 1980's has begun with a rapid surge of inter-German trade. This caught many by surprise, because at the beginning of the decade both countries faced serious economic problems, both domestically and within their respective trading blocs. The GDR had placed severe brakes on investment, and the FRG faced high employment and overcapacity in basic industries. The GDR was having to export more to Western countries other than West Germany to service and reduce its hard-currency debt, and more to the Soviet Union to offset seriously deteriorating terms of trade due to Soviet oil price increases. Moreover, major political factors were absent which had favored the expansion of East-West trade during the early 1970s. General East-West relations had deteriorated in view of developments in Afghanistan and Poland, and inter-German relations had hardened as a consequence of the GDR's raising of currency exchange requirements for visitors from the West, in October of 1980.

A major factor behind the rapid growth of inter-German trade has been the GDR's sharp reduction (by 33% in 1982) of imports from other Western countries, in an effort to gain control over its hard-currency debt. By switching from other Western to West German suppliers, the GDR could take advantage of interest-free swing credits, import from the West without spending hard currency, and find preferential access to both Western bankers and markets. By the end of 1982 West Germany accounted for 64% of the GDR's trade with the West (50% in 1981), and was the GDR's second largest trading partner after the Soviet Union.

The GDR's switching of trade from other Western countries to the FRG allowed the GDR to partially circumvent problems in East-West trade adversely affecting other East European (EE) countries. In 1981 and 1982, when all other EE countries decreased their exports to the West, GDR exports to the West (including the FRG) increased by 31.2% and 20.4%, respectively. Similarly, all EE countries reduced imports from the West during this period, but the GDR by much less than the others (−.7% compared to −22.0% for EE as a whole).[4] To be sure, switching trade from other Western countries to the FRG forced the GDR to abandon its strategy of the 1970s, when the GDR sought to diversify its Western trade and, mainly for political reasons, to prevent too great a dependence on the FRG. That strategy had been somewhat successful, in that the share of West German trade in total GDR trade fell from 10.2% in 1970 to 8.5% in 1980.

For the FRG, the 13% growth of the inter-German trade in 1982 clearly outpaced Bonn's trade with all other Communist (+8%), with EE excluding the GDR and the Soviet Union (−4%), and with non-Communist countries (+5%). Yet the significance of inter-German trade for the FRG is primarily political. The GDR accounts for only 1.5% of West Germany's total trade, and ranks 16th among the FRG's trading partners. During the 1970s, West German trade with the GDR had grown at significantly lower rates than West German trade with the world, the Soviet Union, and EE excluding the GDR.[5]

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[4] DIW Wochenbericht 46/83 (Nov. 17, 1983).

A. Turnover

Turnover of goods and services set a new record in 1982, increasing by 13% to 14.1 billion VE ($5.76 billion) and having more than doubled since 1974. West German exports to the GDR increased by 16% in 1982 to 7.1 billion VE, and imports from the GDR increased by 10% to 7.0 billion VE. This notable growth continued into 1983, when during the first half the two-way trade increased by 16% to 7.9 billion VE; West German exports surged by 33% compared to the same period in 1982, to 4.3 billion VE, while imports rose by only 2% to 3.57 billion VE. The imbalance of first half performance in 1983 is a consequence of the GDR's replacing of other Western by West German suppliers, of a price-determined decline in GDR exports of petroleum products by 25%, and of the comparison basis—in 1982 FRG exports began modestly and ended strong, while the reverse was true for GDR exports.

Over the long run, inter-German trade has shown a remarkable but uneven growth (Table I; Figure I). In contrast to the 1980s, however, much of the growth during the 1970s was price-determined rather than real. Substantial real growth occurred mainly in 1972, 1976, 1980, 1982, and 1983. Price movements during the 1970s favored the GDR, whose terms of trade improved significantly due to its exports to the FRG of petroleum and chemical products.[6] Price increases in those sectors were clearly a factor of growth in the bilaterally balanced trade during the 1970s, for it has traditionally been the GDR which runs a deficit; price movements in those sectors have been much less a factor since the beginning of the 1980s.

TABLE I.—FRG–GDR TRADE, 1950–82 (GOODS AND SERVICES)

[In million VE]

Year	FRG exports	GDR exports	Turnover
1950	359.0	450.8	809.8
1951	155.0	158.2	313.2
1952	153.5	119.0	272.5
1953	261.4	294.7	556.1
1954	450.4	434.4	884.8

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[5] Table I shows that FRG exports to the GDR doubled between 1970 and 1979. In dollar terms, they increased four-fold—less than the five-fold increase of exports to the world, the 8½-fold increase of exports to the Soviet Union, and the 5.8-fold increase of exports to EE (exlcuding the GDR). During the same period, imports from the world increased 5.3-fold, from the Soviet Union 11-fold, from EE (excluding the GDR) 5.4-fold, but from the GDR only 4.7-fold. Consequently, West German exports to the the GDR as a share of total West German exports fell from 1.9% to 1.5%, and imports from the GDR as a share of total West German imports fell from 1.8% to 1.6%. See: UN Economic Commission for Europe, "A Profile of the East-West Trade of the Federal Republic of Germany in the 1970s," Trade/R.422/Add.3 (November 6, 1981).

[6] DIW Wochenbericht 10/83 (March 10, 1983).

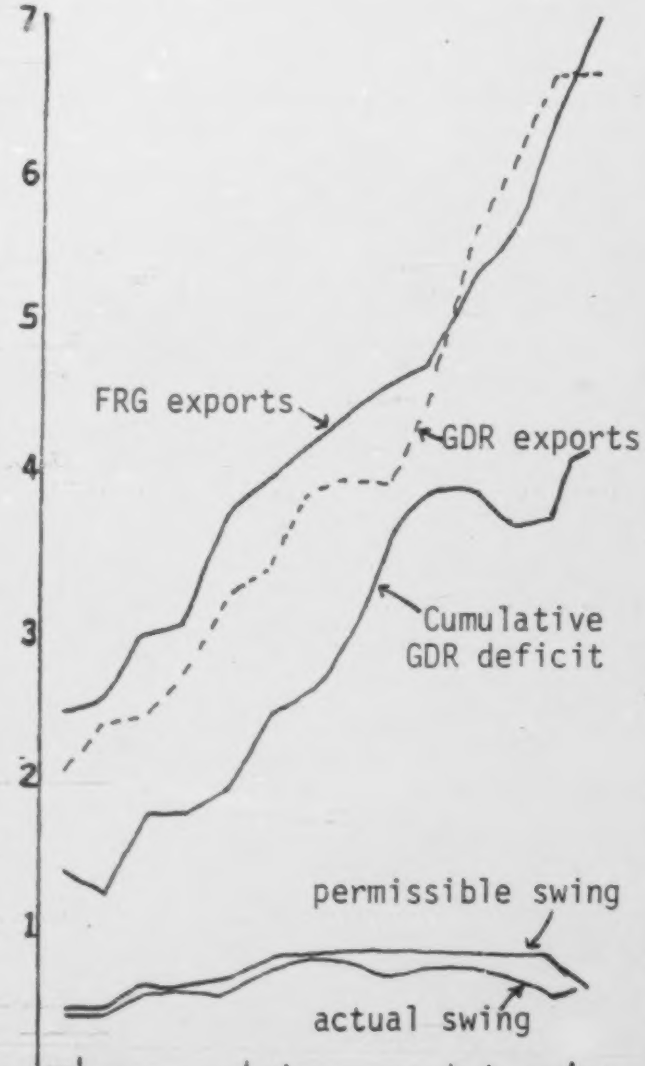
TABLE I.—FRG-GDR TRADE, 1950-82 (GOODS AND SERVICES)—Continued

[In million VE]

Year	FRG exports	GDR exports	Turnover
1955	576.4	583.5	1,159.9
1956	671.5	656.7	1,328.2
1957	838.3	844.7	1,683.0
1958	872.8	879.8	1,752.6
1959	1,062.6	935.4	1,998.0
1960	1,030.3	1,007.3	2,037.6
1961	911.0	917.3	1,828.3
1962	901.6	898.8	1,800.4
1963	907.2	1,028.7	1,935.9
1964	1,192.8	1,111.9	2,304.7
1965	1,224.9	1,249.0	2,473.9
1966	1,680.9	1,323.7	3,004.6
1967	1,490.7	1,254.7	2,745.4
1968	1,458.5	1,450.5	2,909.0
1969	2,077.8	1,656.1	3,733.9
1970	2,438.9	2,064.2	4,548.1
1971	2,652.3	2,581.5	5,233.8
1972	2,959.8	2,394.8	5,354.6
1973	2,938.2	2,688.1	5,626.3
1974	3,662.0	3,256.2	6,918.2
1975	4,028.2	3,390.9	7,419.1
1976	4,469.9	3,938.4	8,408.3
1977	4,662.7	4,070.8	8,733.5
1978	4,754.4	4,066.4	8,820.8
1979	5,092.8	4,791.8	9,884.6
1980	5,874.8	5,854.9	11,729.7
1981	6,128.8	6,349.5	12,478.3
1982	7,079.8	6,988.2	14,068.0

Source: West German Economics Ministry.

Figure 1: FRG-GDR Trade
in Visibles, 1970-1983
(VE billions)



Source: DIW Wochenbericht 10/83
(1983 trends added)

Table II reflects the GDR's debt position vis-a-vis the FRG through 1982. Rare surpluses in the visibles account since 1980, and a 1982 payment of 60 million DM through the special S account, had allowed the GDR to reduce its cumulative deficit to 3.7 billion VE by the end of 1982. Of greater significance, the GDR's exports have grown much faster during the 1978–82 period (from 3.9 billion to 6.64 billion VE) than its cumulative deficit (from 3.68 billion to 3.7 billion VE). During the 5-year period the GDR's relative debt level (ratio of the deficit to exports) thus fell from 94.4% to 55.7%. Even as manageable as that appears, it should in no way be interpreted as reflecting the balance of payments position, for in addition to these trade accounts, the GDR receives very substantial DM hard currency inflows from the FRG, as discussed below.

The imbalanced performance of trade during the first half of 1983, which resulted in a deficit of 724 million VE for the GDR, sharply raised the GDR's cumulative deficit with Bonn to more than 4.5 billion VE, 15% higher than the previous peak of 3.9 billion VE in 1979. Because the swing is being reduced at the very time that trade is rapidly expanding, its relative role in financing the East German deficit has fallen from 30% in the mid-1970s to less than 15% in 1983. Supplier credits, 80% of which have a one-year term, have become the major means of financing the deficit during 1983, although some medium-term tied credits were being used for plant and equipment purchased in earlier years.

TABLE II.—FRG–GDR TRADE, 1970–82 [1]

Year	In billion VE						In percent								
	Visibles trade				Accumulated surplus of FRG [2]	Swing credit utilized by GDR (annual average)	Share of swing financing [3]	Relative level, GDR debt [4]	Annual increase in visibles trade					
									At current prices			At constant prices [5]		
	GDR exports	FRG exports	Turnover	FRG surplus					GDR exports	FRG exports	Turnover	GDR exports	FRG exports	Turnover
1970	2.00	2.42	4.41	0.42	1.35	0.387	28.7	67.6	20.5	6.3	12.3			
1971	2.32	2.50	4.82	.18	1.20	.413	34.4	51.7	16.2	3.4	9.2	15.1	3.0	8.8
1972	2.38	2.93	5.31	.55	1.75	.539	30.8	73.5	2.7	17.2	10.2	1.6	15.3	9.2
1973	2.66	3.00	5.66	.34	1.75	.592	33.8	65.8	11.7	2.4	6.6	−3.5	−6.1	−4.9
1974	3.25	3.67	6.92	.42	1.91	.559	29.3	58.7	22.3	22.4	22.4	−3.6	1.5	−0.8
1975	3.34	3.92	7.26	.58	2.39	.711	29.8	71.5	2.8	6.8	4.9	4.9	5.6	5.3
1976	3.88	4.27	8.15	.39	2.58	.786	30.5	66.5	16.0	8.8	12.1	6.6	3.9	5.2
1977	3.96	4.41	8.37	.45	2.97	.748	25.2	75.0	2.2	3.3	2.8	1.8	3.0	2.4
1978	3.90	4.57	8.47	.68	3.68	.677	18.4	94.4	−1.5	3.7	1.2	1.0	3.5	2.4
1979	4.59	4.72	9.31	.13	3.91	.748	19.1	85.2	17.7	3.2	9.8	−9.1	−3.6	−6.3
1980	5.58	5.29	10.87	−.29	3.87	.745	19.3	69.4	21.6	12.1	16.8	5.6	2.8	4.2
1981	6.05	5.58	11.63	−.48	3.65	.676	18.5	60.3	8.4	5.3	6.9	−1.4	−2.6	−2.0
1982	6.64	6.38	13.02	−.26	3.70	.582	15.7	55.7	9.7	14.5	12.0	10.3	12.3	11.2

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[1] Including Berlin.

[2] Financial balance, which includes services as well as visibles, and cash payments made through the "S" account.

[3] Ratio of swing credits used by GDR to accumulated surplus of FRG.

[4] Ratio of accumulated FRG surplus to exports by the GDR.

[5] Based on DIW calculations.

Source: Deutsches Institut fuer Wirtschaftsforschung (DIW), Wochenbericht 10/83.

What happened in 1983 was that GDR shifted not only its trade, but also its debt from other Western to West German partners. In 1982, the FRG accounted for over 60% of East German trade with the West, but held only 15% of the GDR's hard-currency debt. The GDR's total hard-currency indebtedness in 1982, around $10 billion, was not so great a concern to Western bankers as its structure, which was heavily weighted toward the short term. And of great concern to the GDR leadership was that around 80% of the debt was denominated in dollars, which had considerably strengthened vis-a-vis West European currencies. By shifting the source of imports from other Western to West German suppliers, the GDR could perhaps extend the payments period by winning full-rather than half-year supplier credits, find a more sympathetic banking community since no other Western bankers were willing to further expose themselves, and gradually shift its obligations from hard currency to VE.

TABLE III.—GDR DEBT TO WESTERN BANKS (EXCLUDING FRG)

[In billions of U.S. dollars]

Year	Gross debt	Net debt	Servicing requirement	Debt service ratio	
				Excluding (percent)	Including FRG (percent)
1978		5.31	2.30	163	62
1979	9.53	6.17	3.03	185	72
1980	10.93	7.83	3.71	177	74
1981	11.60	8.28	4.24	194	87
1982	9.55	6.90	4.36	183	85

Source: BIS statistics, which omit supplier credits. Cited in Hannsjoerg F. Buck, "Die Verschuldung der DDR gegenueber der Banken der westlichen Industriestaaten," paper presented at the Gesellschaft fuer Deutschlandforschung (Berlin, September 1983).

But West German firms in 1983 found it increasingly difficult to discount their claims against the GDR at West German banks. West German Government guarantees for supplier credits are applicable only for capital goods exports, which were not in the offing due to GDR austerity measures. And the quasi-official Hermes credits are applicable only for foreign trade, which for political reasons are therefore unavailable for exports to the GDR. Nevertheless, there was still the general feeling that somehow credits supporting the bilateral trade based on VE rather than DM, were less risky than Eurocredits of a more general nature.

B. Structure

It is an anomoly of trade between these two most industrialized members of their respective blocs that the flow of goods, in both directions, is well over half comprised of primary and intermediate products. In 1981–82, 56.5% of the turnover was concentrated in these sectors. In the case of West German exports to the GDR, that reflected the situation for at least 20 years past; in the case of East German exports to the FRG, it reflects a significantly increasing share (from only 30% during the last half of the 1960s), which in turn means that the GDR has historically run a large deficit in these sectors vis-a-vis the FRG.

Chemical products have been the largest single item among West German exports in the primary and intermediate goods sectors, and indeed in 1982, increasing by 29% to a level of 1.2 billion VE, became the largest single item exported overall to the GDR—a trend which continued throughout the first half of 1983. Underlying this development are the cutbacks in Soviet oil exports to the GDR from 19 to 17 million tons per year, which led to reduced production in the petro-chemical sector of the GDR, the largest in EE.[7] In 1983 GDR negotiators were reportedly offering to even pay DM instead of VE for West German chemicals, i.e., to effect the sales outside the clearing accounts. Chemicals are also a significant export of the GDR to West Germany; in recent years the GDR exports in this branch have benefitted from increasingly higher stages of processing, i.e., moving from basic materials more and more into plastics. Elsewhere in Western Europe, East German chemical exports have been thwarted by heavy EEC anti-dumping duties.

TABLE IV.—FRG EXPORTS TO THE GDR

[VE millions]

	1979	1980	1981	1982
Iron and steel	351.4	381.0	326.4	641.9
Nonferrous and precious metals	218.7	235.2	268.3	461.4
Coal, other mining products	268.2	279.2	360.7	127.6
Machinery and vehicles	964.2	1,078.7	1,013.5	877.4
Electrical engineering products	167.1	176.9	174.5	179.9
Crude oil	348.8	588.1	689.0	692.6
Petrochemical products	14.7	15.4	16.4	32.3
Agricultural products	421.8	469.6	459.5	792.6
Forestry products	6.8	6.6	[1] 80.5	61.0
Wooden products	48.5	61.6	[1] 11.8	11.0
Building materials	42.7	40.5	39.5	37.8
Precision and optical goods	39.3	45.1	42.8	27.7
Data processing equipment	91.6	86.3	83.9	69.3
Chemical products	825.4	889.0	930.5	1,203.5
Rubber products	51.7	63.1	62.3	44.5
Woodpulp, paper	90.5	93.5	90.4	90.8
Ceramics	3.8	4.0	4.0	3.7
Glassware	11.4	18.9	11.5	14.2
Textiles	200.4	224.3	237.8	336.2
Clothing	32.4	19.6	39.8	28.5
Pelts and furs	8.1	2.5	2.3	21.2
Leather goods, shoes	98.3	84.7	81.0	103.8
Tobacco	15.8	15.0	12.9	19.5
Miscellaneous manufactures	54.7	60.4	47.0	58.3
Total	4,376.3	4,939.2	5,086.3	5,936.7
Services	716.5	935.6	1,042.5	1,143.1
Total	5,092.8	5,874.8	6,128.8	7,079.8

[1] Since January 1981 pressed wood products are assigned to forestry rather than wooden products.

Source: FRG Economic Ministry.

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[7] The cutbacks of Soviet oil were a consequence not only of difficulties which the Soviet Union is having in supplying its allies given the demands of domestic and hard-currency markets, but also of the GDR's deficit with the USSR, which is the second largest next to Poland's.

TABLE V.—GDR EXPORTS TO THE FRG

[VE millions]

	1979	1980	1981	1982
Coal, other mining products	74.9	132.5	178.3	211.0
Petroleum products	1,104.9	1,481.1	1,634.3	1,729.2
Machinery and vehicles	159.7	304.3	248.4	259.6
Electrical engineering products	162.6	178.5	193.1	228.3
Iron and steel	235.3	220.7	252.1	231.6
Nonferrous and precious metals	119.6	149.8	172.8	202.5
Energy (gas, water, electricity)	5.7	6.0	5.9	6.0
Agricultural products	580.4	588.9	637.2	661.7
Forestry products	28.7	35.5	53.5	91.2
Wooden goods	215.9	243.7	282.4	319.3
Building materials	78.5	103.5	124.2	142.0
Precision and optical goods	43.4	38.3	42.0	46.5
Data processing equipment	143.3	168.2	176.3	209.2
Chemical products	434.9	652.5	734.2	797.2
Rubber products	24.9	28.5	30.2	39.7
Woodpulp, paper	106.8	127.2	156.8	149.8
Ceramics	59.7	70.0	73.1	72.9
Glassware	65.9	78.0	86.7	103.2
Textiles	371.8	394.8	393.3	458.1
Clothing	299.9	318.6	282.0	379.0
Leather goods, shoes	46.3	59.5	64.4	68.9
Miscellaneous manufactures	29.4	32.6	36.5	39.8
Total	4,392.5	5,412.7	5,857.7	6,446.7
Services	399.3	442.2	491.8	541.5
Total	4,791.8	5,854.9	6,349.5	6,988.2

Source: FRG Economics Ministry.

TABLE VI.—STRUCTURE OF FRG EXPORTS TO GDR

[Percent share of total]

	1966–70	1971–75	1976–79	1981–82
Primary and producers' goods	51.8	53.8	53.2	56.5
Iron and steel	16.0	12.8	11.0	8.0
Chemicals	21.3	23.2	20.6	21.0
Nonferrous metals	9.1	8.6	6.7	7.9
Capital goods	22.8	23.8	29.1	22.6
Consumer goods	8.3	9.5	7.6	7.4
Agricultural goods, foodstuffs	16.5	11.7	9.9	12.5

Source: Jochen Bethkenhagen, Siegfried Kupper, Horst Lambrecht, "Die Aussenwirtschaftsbeziehungen der DDR vor dem Hintergrund von kaltem Krieg und Entspannung," Beitraege zur Konfliktforschung April 1980, pp. 39–70; *1981–82 column compiled by author from data in DIW, Wochenbericht October 1983.

TABLE VII.—STRUCTURE OF GDR EXPORTS TO FRG

[Percent share of total]

	1966–70	1971–75	1976–79	1981–82*
Primary and producers' goods	30.9	38.9	44.5	56.4
Petroleum products	2.9	9.8	16.1	24.0
Iron and steel	4.7	7.7	6.9	4.8
Chemicals	8.3	9.0	10.2	13.0
Capital goods	13.6	10.7	10.5	9.8
Consumer goods	29.4	30.6	28.8	22.0
Agricultural goods, foodstuffs	25.6	19.5	15.4	10.8

Source: Jochen Bethkenhagen, Siegfried Kupper, Horst Lambrecht, "Die Aussenwirtschaftsbeziehungen der DDR vor dem Hintergrund von kaltem Krieg und Entspannung," Beitraege zur Konfliktforschung April 1980, pp. 39–70; *1981–82 column compiled by author from data in DIW, Wochenbericht October 1983.

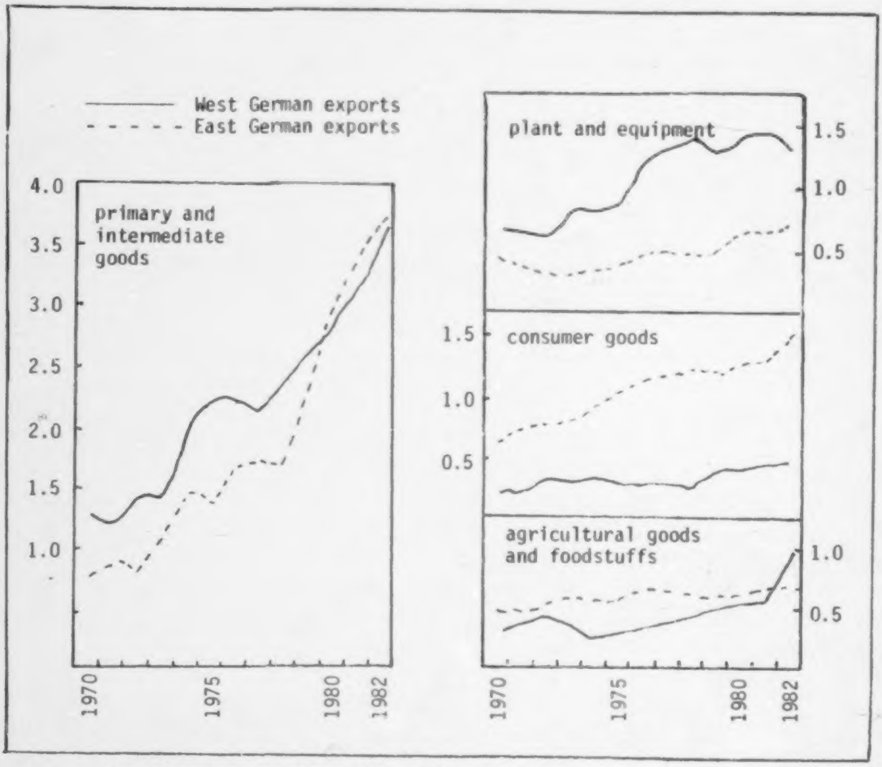
Iron and steel (doubling in 1982 and again in the first half of 1983), coal, and non-ferrous metals have traditionally been strong West German exports to the GDR. In 1979, reportedly in connection with interruptions of supplies from Poland, the GDR signed an agreement to purchase 250 million VE of West German coal annually through 1985. The commitment was met in 1980 and 1981, but in 1982 the GDR drastically reduced its coal imports from the FRG to 128 million VE; the GDR's energy conservation program was proving effective, and the GDR was using more of its domestically mined lignite. Bonn was more consoled than the depressed West German coal sector when the GDR simultaneously doubled its imports of steel from the FRG, also an industry in need of restructuring, to 642 million VE.

GDR exports of primary and intermediate goods to the FRG are led by petroleum products, under a long-term agreement through which the GDR buys crude oil from the FRG and sells roughly twice the amount in petroleum products to West Berlin. Price shifts in the petroleum sector during the decade of the 1970s decisively contributed to the GDR's ability to reach surpluses in its trade with the FRG, and exports in that branch increased from 3% of total exports to the FRG during the second half of the 1960s to 25% in 1982. The long-term agreement, signed in 1979, allows the GDR to receive oil from the West without spending hard currency, just at the time that the Soviet Union is limiting its owns exports of oil to the GDR.

The capital goods sector, traditional strength of each country, is disproportionately low in the bilateral trade, although the FRG exports more than twice what it receives from the GDR in this sector. Immediately following the signing of the Basic Treaty in 1972, large scale exports of West German plant and equipment to the GDR flourished (reflected in the tables with a time lag). But present GDR austerity and rationalization policies have brought to a virtual halt all large-scale imports of plant and equipment and other capital investment goods. The decline of West German exports in this sector is reflected in the low 22.6% share of total exports for 1981–82, but the severity of the decline will also be felt in the next several years. West German producers of capital goods are resigned to waiting until 1985, when the new 5-year plan evolves, but even if they are successful at that time, there will be a significant time lag before actual trade picks up. The decline in this sector has been partially offset by an increase in exports of components and other intermediate goods.

GDR exports of capital goods to the FRG have been decreasing in relative terms, and hovered around 10% of total exports during the 1970s in spite of intensive efforts to increase sales in this sector. Mechanical and electrical engineering products, the leading sector of GDR exports to the East and to Western countries other than the FRG, have always had a very small share of the highly demanding West German market. One factor underlying this situation is the heavy commitment of the GDR to specialize for the CMEA in this sector, which causes the East German industry to orient its production to CMEA rather than West German requirements.

Figure II: Commodity Structure of Inter-German Trade
(in VE billion)



Source: DIW Wochenbericht 10/83 (March 10, 1983).

Textiles and clothing dominate the two-way trade in the consumer goods sector, in which East German exports are three times as large as those of the FRG. Indeed, nearly 80% of the GDR textiles and clothing exports to the West go to West Germany. The GDR is virtually shut out of the highly protectionist markets in the rest of the OECD countries, and even in the FRG it is facing intense competition from producers in the Far East.

In the agricultural sector, FRG exports to East Germany have increased sharply in recent years, including a 73% increase in 1982 when, for the first time, grain was purchased from the FRG. The GDR paid higher than world market prices for the grain (by 35 million VE), since the bilateral German trade cannot involve EEC agricultural subsidies. This is a clear indication of the severity of the GDR's hard-currency crisis, a confirmation of the unavailability of supplier credits in the West other than West Germany, and a reflection of the GDR's determination to replace other Western suppliers by those in West Germany. The GDR had tried, without success, to get supplier credits from French and U.S. banks for the grain purchases. FRG exports of agricultural products to the GDR increased significantly again in 1983, although during the year the GDR once again received French and Canadian credits for grain imports, and the unusual purchases from the FRG in that branch were not expected to be sustained. GDR agricultural exports enter the FRG without the EEC compensatory levies, and thus benefit from the relatively high EEC prices. The profitability of such exports is difficult to determine, however, due to the inefficiency of the GDR agricultural sector. A large share of these agricultural exports by the GDR serve to supply West Berlin.

The GDR has run surpluses in its visibles trade with the FRG 1980–1982. The surplus in 1982 however was more than offset by the FRG's traditional surplus in services, based mainly on interest payments and the use of West German harbors, especially at Hamburg. In 1980 Hamburg became the second largest "GDR port," after Rostock, as a consequence of Polish strikes which diverted services from Gdansk.

The structure of trade between the two countries does not reflect the typical pattern for either country, either vis-a-vis its own trading bloc or, more significantly, vis-a-vis the other (i.e., West German trade with the CMEA or East German trade with the EEC).[8] The special status of inter-German trade clearly plays a role here, which is especially apparent in the present strategy of the GDR to shift from other Western to West German suppliers. Crude oil, non-ferrous metals, and grain are not typical exports of the FRG. East German exports of textiles and clothing, chemicals, agricultural goods, and refined petroleum products find access to the West German market but not to other Western markets in these highly protected sectors.

Politicians on both sides of the border have occasionally suggested that inter-German trade helps to alleviate unemployment problems in the FRG. Estimates suggest that around 70,000 jobs in each country are created by the bilateral trade (0.3% of West German total employment). Because of the clearing arrangement on which this trade is based, however, the net effect on unemployment (i.e., jobs created by exports less those lost by imports) may be very small. In this connection, it must be noted that East German exports to the FRG are generally much more labor-intensive than West German exports to the GDR. On the other hand, negative employment effects of West German imports from the GDR in such sectors as textiles and clothing are reduced to the extent that those imports replace imports from other countries. To be sure, the employment effects on both sides of the border are firm-specific, and have a greater impact on the sectoral distribution of employment than on total employment.

C. Prospects

The imbalanced performance in the year from mid-1982 to mid-1983, and the commensurate increase of the East German deficit vis-a-vis the FRG, suggest that the very rapid recent growth of trade between the two countries will lose much of its impetus in 1984 and beyond. However, in no way does that reduce the significance of inter-German trade, due to its special status. There is a general discrepancy in East-West trade between the import needs of the Eastern partner and its export capabilities—a discrepancy noticeably reduced by the special nature of inter-German relations.

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[8] An excellent analysis of this is found in: Horst Lambrecht, Der Handel der Deutschen Demokratischen Republik mit der Bundesrepublik Deutschland und den uebrigen OECD-Laendern, DIW Sonderheft 119-1977.

In the medium term, the recent surge in inter-German trade might well taper off once (and if) the GDR is judged more favorably by the international financial community; clearly, there are strong political reasons for the GDR to diversify its trade with the West. Moreover, the burden of correcting the GDR's deficit with the Soviet Union should not be underestimated. In the long run, however, the present East German policy of halting plant and equipment imports is bound to affect adversely the GDR's competitiveness on world markets. While that policy negatively affects inter-German trade for the moment, it is likely to lead in the long run to another surge of trade between the two countries because of that non-competitiveness on world markets and because of the atypical structure of inter-German trade. Foreign trade was a growth factor for the GDR throughout most of the last decade, but it seriously constrained growth at the beginning of the 1980s; it is precisely at such times that the special status of inter-German trade gains in significance.

Interestingly, and in contrast to the FRG's trade with other EE countries, inter-German trade is relatively devoid of genuine inter-firm industrial cooperation, i.e., involving coproduction, specialization, and the like. Industrial cooperation between the two remains at a very low level of development, and is characterized mainly by simple subcontracting, mainly in the consumer goods sector. Genuine industrial cooperation offers a future path of growth in inter-German trade, but is highly unlikely given the GDR's explicit policy of strictly limiting contacts between citizens of the two countries.

A further constraining factor in the growth of inter-German trade are East German policies introduced as a consequence of its hard-currency position. West German firms are increasingly complaining about dumping, changed financing requirements, and countertrade practices. The number of dumping allegations against imports from the GDR has dramatically increased, especially in the steel, upholstered furniture, and toys sectors, but also involving bottled beer, laundry services, cement, fever thermometers, and timber. If dumping is proved, either quotas or stricter licensing procedures can be placed on imports from the GDR. East German furniture exports, for example, alleged to be selling at prices 50% below West German production costs, must now be licensed individually instead of benefiting from general approval, as before. But FRG authorities prefer to handle dumping complaints unofficially, and in practice often the allegations alone are sufficient to cause the GDR to raise prices. It does not appear as if the dumping charges in the past have reduced the GDR's share of imports in the affected branches.

Since early 1982 the GDR has insisted on more favorable financing terms for supplier credits. For example, the GDR has been demanding 360-day repayment terms, typically applied only to plant and equipment exports, for consumer goods and chemicals, two sectors in which 180-day or even 90-day terms are much more common. The costs of that credit, which normally varies between 6% and 12%, can easily be calculated into the price of the goods,

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but the extension of terms makes interim financing necessary, especially for small- and medium-sized firms, and might cause the failure of many potential projects to materialize. The extension of payment periods is in some cases being requested even for previously signed contracts.

Countertrade requirements have become increasingly stringent in regard to the number of firms involved, the percentage level of countertrade demanded, and the choice of goods available for offsetting purposes. In 1982 nearly 50% of the West German firms exporting to the GDR were confronted with countertrade demands, including even suppliers of spare parts for machinery and equipment supplied years earlier. In by far the majority of cases, 100% countertrade levels are being demanded, and often 130% in the case of West German exporters of plant and equipment, to cover financing costs, or in the case of firms in economically depressed industries. To be sure, such high levels represent mainly only an initial negotiating position, but it is clear that the average level of countertrade finally agreed upon in 1982 was above 50% of the export contract values. More seriously, it is alleged that the choice of goods available for offsetting purposes has been drastically reduced. Machine tools and other products of the metal-processing branch are being pushed strongly, and they have never been competitive on the West German market. In principle, the Berlin Agreement does not approve of countertrade practices. They are accepted by West German authorities, however, and viewed by East German authorities as contributing to the long-run continuity of inter-German trade.

In contrast to the FRG's trade with other EE countries, a large number of small- and medium-sized West German firms participate in trade with GDR. More than 6,000 such firms are involved, accounting for around half the turnover of trade between the two countries. But it is these firms which are most seriously affected by the more stringent financing and countertrade requirements. The small- and medium-sized firms lack the financing capabilities, sufficient internal demand or adequate marketing networks to handle compensation goods, and the experience and flexibility sufficient to balance deliveries in aggregate over time, instead of for each individual transaction.

To be sure, the GDR also has complaints about the bilateral trade, especially regarding the increased number of dumping investigations and West German quotas on GDR exports, which appear according to the GDR whenever East German products approach a 5% share of the West German market. Such quotas are highly concentrated in agricultural products, but affect also especially textiles and clothing, and iron and steel. High unemployment and overcapacity in these industries, in addition to competition from third world countries, have led to increased domestic pressure for protection.

IV. Unilateral Hard-Currency Flows to the GDR Outside Trade Accounts

The special status of inter-German economic relations reaches far beyond the clearing trade per se. Substantial transfers of hard currency are made to the GDR from West German public funds, mainly from the federal, West Berlin, and postal budgets. Equally substantial private transfers are made, mainly in the form of currency exchange requirements, visa fees, hard-currency shop receipts, and gifts. Such public and private transfers currently amount to more than 3 billion DM per year (nearly $1.2 billion). In addition to that, the GDR indirectly saves considerable hard currency through the special status of inter-German trade, aside from the point that the trade is not conducted in hard currency.

These unilateral payments are varied in nature, have proliferated since the early 1970s, and involve such relatively large amounts and are so politically sensitive that they must be considered is assessing the special status of relations between the two countries. Bonn authorities are generally reluctant to openly discuss these payments. The figures are made public mainly because the Parliament by law must answer the questions regarding them posed by the opposition.

One figure is not made public, and is not included in the data below. In 1962, the FRG Minister for Inner-German Affairs (Barzel) initiated a program under which the FRG purchases the freedom of political prisoners in the GDR. Since then the freedom of around 19,000 prisoners has been purchased, at a price of about 1 billion DM. Between 1,000 and 1,500 prisoners are reported to be sold annually (1,371 in 1981, and 1,425 in 1982). Although the GDR places a condition of secrecy on the payments, unofficial estimates suggest a going price per prisoner of around 50,000 DM, up from an earlier 40,000 DM.[9]

A. DM Transfers to the GDR From West German Public Sources

Table VIII sumarizes the major West German public payments of DM to the GDR. The major expenditure from the Bonn budget during the 1970s was clearly that for transit fees (totaling over 4 billion DM during the 1972–1982 period), although since 1979 federal expenditures for transportation improvements inside the GDR have approached the same magnitude. The transit agreement was signed in December of 1971, and paved the way for a series of related agreements, all aimed at the improvement of private and commercial traffic between the two German states and between the FRG and West Berlin. The agreement stipulated that Bonn pay an annual lump sum of 234.9 million DM from 1972 through 1975 for the use of road, rail, and inland water routes between Berlin and the FRG. The sum was subsequently raised to 400 million DM per year during 1976–1978, and to 525 million DM per year from 1979 through 1989. In addition to these transit fees, since 1980 the FRG has had to pay a lump sum of 50 million DM annually for road tolls.

Since 1979, FRG investments in improving the East German land and inland waterway routes between West Berlin and the FRG have accounted for well over 40 percent of West German federal budget transfers to the GDR. The route improvement projects, begun on a minor scale in 1976, now closely rival transit payments in size, which before 1979 had accounted for over 80 percent of transfers directly from the Bonn budget. Major road improvement projects include the building of a new autobahn between Hamburg and Berlin (1.2 billion DM), and the improvement of existing roads through Marienborn, Helmstedt, and Wartha (around 770 million DM). A 1983 proposal by the GDR for the FRG to fund the improvement of roads linking Berlin to the West German border town of Hof, at a cost of 500 million DM, has been temporarily shelved in Bonn due to budgetary considerations.

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[9] As reported in "In diesem Jahr 1,425 Haeftlinge freigekauft," Die Welt (December 22, 1982).

TABLE VIII.—DM PAYMENTS TO THE GDR FROM PUBLIC SOURCES, 1972–82

[In DM millions]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
FRD federal budget	273.4	280.0	251.3	260.7	477.1	523.4	512.6	990.7	921.2	1,046.2	1,002.3
Of which:											
Transit fees	234.9	234.9	234.9	234.9	400.0	400.0	400.0	400.0	525.0	525.0	525.0
investments in GDR transport sector					46.0	98.4	81.3	566.0	327.5	454.6	410.3
Visas, entry fees [1]	38.5	45.1	16.4	25.8	31.1	25.0	31.3	24.7	18.7	16.6	17.0
Road use fees									50.0	50.0	50.0
Berlin budget [2]	61.65	20.6	23.2	39.3	94.4	70.3	65.7	58.2	76.9	93.8	94.0
Other public budgets	62.9	22.9	−83.0	−78.0	−34.0	0.1	74.2	25.7	−4.2	1.5	1.5
Of which:											
FRG Postal Service		34.7	34.3	34.1	36.1	95.0	95.8	96.2	96.5	96.5	96.5
FRG Railway		−11.8	−117.3	−112.1	−70.1	−94.9	−21.6	−70.5	−100.7	−95.0	[3] −95.0
Total	397.95	323.5	191.5	222.0	537.5	593.8	652.5	1,074.6	993.9	1,141.5	1,097.8

[1] The FRG reimburses visa and entry fees for pensioners in the FRG and all citizens in West Berlin.
[2] Over 90 percent of these payments are for services rendered by the GDR in the disposal of construction refuse, trash, and sewage. Less significant, but recurrent, are payments for subway maintenance.
[3] Estimated on the basis of the 1981 figure.

Sources: FRG Parliament publications 8/1554 (1978), 8/2598 (1979), 8/3790 (1980), 9/553 (1981), and 9/1391 (1982).

The FRG has made similar ad hoc payments (in contrast to the lump sum transit fees, which are recurrent) for improving rail and canal traffic facilities in the GDR. In 1975 an agreement was reached to improve rail links to Hamburg (51 million DM) and later to Helmstedt (89 million DM). In 1980 the GDR proposed FRG funding for the modernization and electrification of all five transit railways to Berlin. Chancellor Schmidt rejected the project, which would have cost the FRG over 2 billion DM through 1990, out of budgetary considerations. In 1983 the GDR suggested a project to electrify only one rail line to Berlin. Bonn has paid 70 million DM for repairing and reopening the Teltow canal in 1981, which links West Berlin to the FRG; it will also pay 120 million DM to repair and widen other canals.

Not included in Table VIII is a new agreement, reached in March 1983, involving a 25-year renewable contract for deliveries of Soviet natural gas to West Berlin. By the mid-1990s, when West Berliners will have switched to compatible equipment, these supplies will meet 25% of the city's energy needs (now inefficiently served primarily by heating fuels). Ruhrgas of West Germany and the FRG federal government will finance the building of the necessary pipe line from the Czech border through East Germany to Berlin, at a cost of 230 million DM. In addition, annual transit fees of 9 million DM will be paid in VE, helping to offset the GDR's traditional deficit in the services account.

Another West German federal budget payment not reflected in the table stems from an agreement reached in September of 1982, which commits the FRG to pay 68 million DM to the GDR over a 3-year period (1983–85) to have the GDR clean water which flows into West Berlin. This is viewed as a first step towards a later agreement on cleaning the Werra and Elbe rivers. Negotiations on a common environmental protection policy for the two countries began in 1973, but have moved very slowly. As far as cleaning rivers that flow into Berlin is concerned, this clearly also is in the interest of the GDR, for the rivers are no cleaner when they leave Berlin.

DM payments to the GDR from the West Berlin budget, half funded by Bonn, are essentially for services rendered in the areas of trash, construction debris, and sewage removal; they total just under 100 million DM per year. A postal agreement between the FRG and GDR provides for DM payments to the GDR for "excess" postal services rendered. A general lump sum payment of 85 million DM annually from 1971 through 1982, plus much smaller ad hoc payments for telex lines, had been largely offset by payments from the GDR to the West German railway for services rendered. However, from 1983 through 1990 the postal payments to the GDR have been raised from 85 million DM to 200 million DM annually. The new agreement commits the GDR to speed up mail delivery, reduce the number of "lost" letters, to loosen restrictions on the number and content of gift parcels, and to permit new telephone and telex lines.

B. DM Transfers to the GDR From Private Sources

Only crude estimates can be made of private DM transfers to the GDR, but by consensus such transfers are at least as large as the public transfers discussed above. Currency exchange requirements for visitors to the GDR are generally estimated to fall between 130 million and 230 million DM per year. Visa and road fees not reimbursed by the Bonn government run around 80 million DM per year. Intershop and Genex (hard-currency stores and gift shops) earn together over 850 million DM annually according to most estimates. No estimates were found by the author concerning Intertank, the hard-currency service stations. While service or goods are received for all these payments, the fact that the payments are made in DM substantially helps the GDR service its hard-currency debt to the West. Private gifts, typically estimated at around 1 billion DM per year, do not serve that purpose but do improve the living standards in the GDR.

C. Indirect Savings to the GDR Through the Special Status of Inter-German Trade

Any attempt to quantify the economic gains to the GDR from the special provisions of inter-German trade is of necessity highly speculative. Such efforts have been made, but suffer from their highly hypothetical nature, the lack of data, highly tenuous assumptions regarding price elasticities and competitive responses, and above all a great deal of uncertainty regarding the distribution of benefits between the two countries, between Bonn in foregoing taxes versus the West German consumer, and so on. No one can deny that preferences are given to the two-way trade, but to accurately assess the distributional effects of those preferences is exceedingly difficult.

Easiest to assess are the savings which the GDR gains through the interest-free swing credit, although even there one must make assumptions concerning interest rates, alternative possibilities, and so on. From 1970 through 1982 the GDR utilized the swing to the extent of 8.2 billion VE. Assuming an average interest rate of 8%, the GDR thereby saved 658 million DM in interest payments, for an average annual savings of over 50 million DM. (Appendix I.)

Imports of manufactures and industrial goods from the GDR enter the FRG tariff-free. In that respect, they are treated as if they were produced in the FRG or elsewhere in the EEC. In addition to that, however, they are considered to have been taxed already by "German" authorities. Consequently, the West German importers can deduct from their turnover taxes 11% (5% until May, 1970, and still for some goods) of the value of their imports from the GDR. Conversely, the FRG normally does not tax exports, but does assess a 6% tax on exports to the GDR (not the normal 13%, raised in July 1983 to 14%, tax on domestic commerce). West German authorities state that the intent of these special tax rebates on imports and assessments on exports is to help alleviate the persistent GDR deficits in inter-German trade. Because of these special regulations, the federal budget has extra receipts in the case of exports and fewer receipts in the case of imports. Since the latter figure is the larger, this leads to deficits in the budget, which amounted to 310 million DM in 1981 (up from 90 million DM in

1970).[10] This tax arrangement does not of course involve direct payments to the GDR, but it does improve the price competitiveness of GDR goods and thus helps the GDR indirectly.

West German imports of agricultural goods from the GDR are not subject to EEC compensatory levies. The GDR could benefit substantially from this, if its agricultural sector were more efficient. As it is, East German exports of agricultural goods and foodstuffs as a share of total exports to the FRG have fallen from 25.6% during the second half of the 1960s to 10.8% during the early 1980s (a consequence strongly affected by the increase in the prices of petroleum products). On the other hand, West German exporters of agricultural goods to the GDR are at a disadvantage vis-a-vis other EEC members. Because the GDR is not considered a third country, West German producers receive no subsidies for their exports of agricultural goods to the GDR.

It may be assumed that these special tariff, tax, duty, and other provisions regulating inter-German trade are of mutual benefit to both countries, and that West German importers and exporters take into consideration the special benefits during contract negotiations. What is virtually impossible to assess, however, given the unavailability of data, is the distribution of benefits between the two countries and within each country, and the extent to which third countries are placed, as they surely are, at a competitive disadvantage.

V. THE POLITICAL CONTEXT OF INTER-GERMAN ECONOMIC RELATIONS

The Second World War and the subsequent division of Germany destroyed the natural network of economic relations within the former German Reich. This created difficulties for the Soviet Zone in particular, which had been more highly dependent on other areas of the Reich because of its economic structure, its small domestic market, its lack of raw materials, and the high degree of specialization of its industries. There were thus strong economic pressures for trade, exacerbated by the task of reconstruction, the burden of reparation payments, the inappropriateness of the import-substitution policies introduced during the early post-War years, and the pre-Wall flight of many citizens.

It was therefore tempting from the very beginning for the FRG, for whom inter-German trade is not so economically significant, to use trade as a lever to achieve political objectives, which included: the pursuit of eventual reunification, the prevention of the rapid integration of the GDR into the Eastern bloc, easing the daily life of persons living in the GDR, and preserving access to West Berlin.[11] To this day economic considerations prevail in the GDR, and political considerations in the FRG, in the formulation of the respective policies on mutual trade.[12]

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[10] Horst Lambrecht, "Der Innerdeutsche Handel—ein Gueteraustausch im Spannungsfeld von Politik und Wirtschaft," Aus Politik und Zeit Geschichte (October 9, 1982).

[11] The Jessup-Malik Agreement of May 1949, designed to end the Berlin Blockade, formally linked interzonal trade to the freedom of access to Berlin.

[12] This is not to say that political considerations are unimportant in GDR trade policy. Until the early 1970s, its trade policy towards the West was designed to gain political support for official recognition, and during the 1960s it introduced "Campaign Insulation" (Aktion Stoerfreimachung) to reduce its economic dependence on, and therefore political leverage of, the FRG.

At times, especially during the early years of the Cold War era, the FRG pursued a negative linkage of trade denial in seeking its political objectives. Indeed, Chancellor Erhard had to warn the Western allies to exercise restraint in their trade with the GDR to avoid robbing the "Political instrument of inter-German trade" of its effectiveness. And in pursuing its constitutionally-based commitment to reunification, the FRG introduced the Hallstein Doctrine, which called for the severance of diplomatic relations with, and withdrawal of economic aid to, countries which officially recognized the GDR.

Since the late 1960s, West German strategy has been based mainly on a positive linkage and efforts to promote stability in general East-West relations as a precondition of eventual German unity. The Grand Coalition of Kiesinger and Brandt during 1967–69 substantially revised West German trade policy towards the East in general. Inter-German trade was fostered by dynamizing the swing (to cover in value 25% of GDR exports to the FRG in the preceding year), by granting federal guarantees on investment goods exports to the GDR, and by providing favorable refinancing facilities for West German exports to the GDR. Quotas on imports from the GDR were relaxed, and a number of imports from the GDR were given general approval instead of ad hoc licensing as before. Tax rates were adjusted to stimulate inter-German trade. A final waiver was made of the obligation to settle deficits annually, and the individual balancing of accounts (i.e., for hard and soft goods) was no longer required. The revocation clause was repealed, which had given West Germany the right to revoke permission for capital goods exports in the event that access to Berlin was jeopardized. These actions in aggregate represented significant economic concessions and led to substantial increases of trade, but they did not lead to notable improvements in the political relations between the two states.[13]

It remained for the Brandt Government, formed in late 1969, to offer significant political concessions to the GDR. Following treaties with the Soviet Union (August, 1970) and Poland (December, 1970), in the Basic Treaty of December 21, 1972, Bonn recognized the sovereignty of the GDR. From the viewpoint of the FRG, the Basic Treaty provided a means of alleviating some of the more adverse consequences of the existence of two German states, without compromising the principle of one nation. From the viewpoint of the GDR, the Basic Treaty was a major step towards the normalization of relations with West Germany and an impetus for subsequent diplomatic acceptance into the international community by the West in general. The FRG still refuses, however, to recognize East German citizenship and to upgrade the present missions into embassies, as befitting of sovereign states. Less important demands of the GDR include the revision of the Elbe border and the closing of a West German documentation center in Salzgitter on alleged acts of East German brutality.[14]

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[13] See Arthur A. Stahnke, "The Economic Dimensions and Political Context of FRG-GDR Trade," in East European Economic Assessment, a compendium of papers submitted to the Joint Economic Committee, U.S. Congress (Washington, D.C.: GPO, 1981), 340–375.

The West German refusal to recognize East German citizenship or to upgrade the present missions to the full status of embassies exacerbates an acute problem of legitimacy for the GDR leadership. The otherwise notable economic progress of the GDR still leaves its citizens much worse off than those in West Germany, and the gap in political legitimacy, at least from the perspective of the West German population, is every bit as large. These differences are constantly kept in focus by the strong influence on East Germans of West German radio, television, and personal contacts.

To reduce the number of contacts between citizens of the two states, in October of 1980 the GDR sharply increased to 25 DM the daily currency exchange requirements for visitors from West Germany and West Berlin (from 13 DM and 6.50 DM, respectively). The exchange requirements were also applied for the first time to pensioners; children between the ages of 7 and 16, previously exempted, had to exchange 7.50 DM per person per day. The number of visitors from West Berlin fell by 50%, and from West Germany by 25% (in total a fall from 8 million to 5 million visitors per year).

West German authorities held the new currency exchange requirements to be contrary to both the spirit and the letter of the Helsinki agreements and the Basic Treaty. The exchange requirements had already become one of the more contentious issues between the two states in November of 1973, when they also had been doubled. At that time, the FRG was successful in gaining a partial rescission of the measures, mainly by linking the issue to the December 1974 increase of the swing level to 850 million VE—a de facto linkage which the GDR took great pains to obscure.

In 1980 the linkage emerged anew, for negotiations on renewal of the swing, which was automatically to fall from 850 million to 200 million VE in the absence of further agreement, were underway. As it happened, the positions were highly polarized when Chancellor Schmidt travelled to the GDR to meet President Honecker at Werbellinsee in December of 1981. The GDR had all along contended that the exchange requirements were not negotiable, while in the FRG the linkage between the exchange requirements and the swing had been widely publicized as virtually a sine qua non of negotiations. With such polarization, compromise was inevitably difficult.

The agreement reached at Werbellinsee was to reduce the swing only slightly (to 600 million VE by 1985), and to maintain the currency exchange requirements—an agreement which drew fierce criticism from the West German CDU-CSU opposition. The West German negotiating position was perhaps tempered by a desire not to affect adversely the rapidly expanding trade. Another clearly important factor, however, was the unrest in Poland, which culminated in the imposition of martial law in Poland at the very time that Schmidt and Honecker were together at Werbellinsee, and which made it virtually impossible for the GDR to consider opening up the country to substantially increased contacts with the West.

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[14] The FRG holds that the border lies on the Eastern shore instead of midstream. The Prime Minister of Lower Saxony reportedly spurned a compromise suggested by Chancellor Schmidt. Similarly, the federal government has little control over the documentation center, and therefore is in no position to respond to GDR demands regarding its closing.

The West German leadership was clearly disappointed about not having been able to negotiate a reduction of the exchange requirements, and was hardly sincere in stressing the smaller improvements which allegedly preserved the "political-psychological context" of its policy towards the GDR. A new pedestrian passageway was opened across the border in northern Berlin. As of July 1, 1982, daily visitors from West Berlin may remain in the Eastern section until 2:00 a.m. instead of midnight (which is of no use to those depending on public transportation, and which did not satisfy the West German request for a full 24-hour stay regardless of when the visit began). Around 45,000 citizens who had fled the GDR illegally before 1981 may now return to visit without fear of arrest (excluding military deserters). Conditions were relaxed which allow East German citizens to visit the West for urgent family reasons.

The GDR also agreed to increase by 10 million marks annually the amount available for non-commercial financial transfers. This refers to an April 25, 1974 agreement through which pensioners living in the FRG or GDR are allowed to receive social security payments from accounts in the other state. Former East Germans living in the FRG receive DM, and former West Germans living in the GDR receive East Marks, up to 200 marks monthly, at a 1:1 conversion rate. But the agreement specified that the transfers be balanced, and because there are significantly more former East Germans living in the FRG (around 25,000) than vice versa, there is a long waiting list for payments out of the frozen GDR accounts. On November 16, 1978, an agreement was reached that during 1979–82, the GDR would permit the annual transfer of 50 million marks more than it received from the FRG for such purposes. On June 18, 1982, the GDR agreed to increase that by 10 million marks, to 60 million marks annually for 1983–85.

Such humanitarian gestures have long been sought by the FRG, and were granted as compensation for not having the swing reduced to 200 million VE. But the West German leadership was not able to materialize the high hopes which it itself had inspired in regard to a reduction of the currency exchange requirements. On the other hand, the GDR is well aware that such improvements, in the long run, are a sine qua non of improved economic relations.

In early 1983 the political context of inter-German economic relations was less than auspicious. The pending deployment of NATO missiles in West Germany had evoked warnings from the Soviet Union and threats from the GDR of a new "ice age," in which inter-Germany contracts would be severely restricted. A new conservative Government had been elected in West Germany which was expected to introduce a far tougher policy than before towards the East in general and the GDR in particular. Harsh words had been exchanged over the deaths from apparent heart attack of two West Germans while under questioning by East German border guards, and President Honecker called off in April what was to have been the first visit to the FRG by an East German leader, planned for late summer 1983.

Against all expectations, during the course of 1983 inter-German political relations seemed to improve—if judged on the basis of the number of high level contacts, the resumption of long postponed talks on cultural exchanges and cooperation in science and technology, and references by both sides, in connection with anniversaries recognizing Marx and Luther, to the common bond of German identity which has survived the division of the country. The strife over the missiles proved to be much less intense than that over rearmament and NATO membership in the 1950s. The new West German leadership opted for the continuity of the Ostpolitik which it as opposition had severely criticized, and indeed strengthened that policy towards the East by providing, for the first time, government guarantees of an untied billion DM loan to the GDR. The border deaths issue was handled by the East German officials in an unusually forthcoming and tactful manner, which signalled perhaps the intent to nurture inter-German relations as best as possible under the uncertain conditions which prevailed. And Honecker's calling off of the planned visit to West Germany appears to have been for essentially practical reasons, for there were clearly unfulfillable expectations on both sides (e.g., both missile deployment and exchange requirements were non-negotiable); meeting under such conditions would have been counter-productive.

The Christian Democratic (CDU) government under Chancellor Kohl, elected in late 1982, is joined in coalition by the Free Democrats (including Foreign Minister Genscher and Economics Minister Lambsdorff, both of whom retained their offices) and the Christian Social Union (CSU) under Strauss. The Free Democrat Party has continued its role as the guardian of Ostpolitik, which it helped create while allied with the former Social Democrat-led government in Bonn. On the other hand, the CSU had for decades been a fierce critic of the GDR, and the new Minister for Inner-German Affairs, Heinrich Windelen, a Roman Catholic refugee from Silesia in East Germany, was reputed to be a hard-liner on relations with the East. There was thus considerable uncertainty within the coalition upon its formation as to the eventual policy towards the GDR.

In addressing "The State of the Nation in Divided Germany" [15] in June, 1983, Chancellor Kohl essentially blamed the GDR for the failure to achieve good relations, contending that the GDR limited contact between the citizens of the two states. Kohl affirmed the West German view that the GDR is a sovereign but not foreign state, and once again stressed the national responsibility toward Berlin as a symbol of the unsettled German question. At the same time, the Chancellor made clear his intentions to abide by agreements previously reached, and to pursue the continuation of policies aimed at improving relations with the GDR.

Within one week, at the end of June, the West German Government guaranteed a private bank credit to the GDR of 1 billion DM (the equivalent of around $380 million). The loan is the first untied credit given to the GDR by West German banks,[16] and is repayable over 5 years and carries an interest rate of 1% over Libor.[17] A consortium of 24 West German banks, managed by the Bavarian State Bank, was involved; Strauss, the prime minister of Bavaria and leader of the coalition member CSU, played a central role in the negotiations. Two equal disbursals were made during the first week of July, and the fact they were separated only by a week indicates the GDR's urgent need for the credit in paying off part of its estimated $4 billion servicing requirements to the West during 1983.

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[15] In the 1970s, West German heads of state titled the address merely "On the State of the Nation"; Chancellor Kohl was using earlier precedents.

[16] According to the Sueddeutsche Zeitung (June 30, 1098), the West German Government had only once before guaranteed such a non-tied credit to an East European country, to Poland in 1976.

The GDR had reportedly sought 4 billion DM in credits from the FRG, after having unsuccessfully sought loans from Swiss, Austrian, and Kuwaiti sources. But due to the size and structure of East German hard-currency debts (40% of which are in instruments with lives of shorter than one year), Western banks were reluctant to further expose themselves. The West German Government's guarantee is especially important because an export credit guarantee by Hermes, the quasi-government insurance agency, was not possible since Hermes may extend guarantees only on loans to foreign debtors. Moreover, the currency agreement covering credit guarantees on trade between the two states provides only for coverage of deliveries of investment goods. Intermediate goods and semimanufactures not directly connected to the production of investment goods are explicitly excluded from the coverage, but those goods have become an increasingly significant share of West German exports to the GDR, and investment goods less so, because of GDR retrenchment and austerity measures.

However great the economic significance of the credit, political considerations clearly prevailed in Bonn. The Government's guarantee was announced 5 days before Chancellor Kohl was to travel to Moscow to discuss, among other things, the Soviet response to the probable deployment of NATO missiles in West Germany in late 1983. Shortly thereafter, Bonn named a specialist on the Soviet Union[18] to succeed a leading proponent of better relations with the U.S. as state secretary at the West German Foreign Office. Both the loan and the appointment were widely interpreted to suggest West German efforts to alleviate tension during a period of strains between the superpowers.

Domestically, the loan aroused considerable controversy in West Germany for political rather than financial or economic reasons. The loan is secure financially according to a reported clause in the agreement stating that if the GDR missed any payments, the money would be recovered through a West German withholding of payment on annual contracts it has with the GDR (e.g., the transit agreements, postal payments, and so on). The political criticism of the loan comes essentially from members of the ruling coalition who from all past experience had anticipated a much harder line to be taken by Chancellor Kohl and especially Franz Josef Strauss. Both came to power promising to insist on quid pro quo, but guaranteed the credit with little evident commitment from the GDR to make concessions on the most pressing of West German demands, the lowering of the minimum exchange requirements for travellers into East Germany. However speculative, one might suggest also the possibility that the loan was motivated in part by a desire of the leadership to reduce the impact of the certain anti-missile demonstrations in West Germany later in the year, as internal opposition to the NATO deployment is itself clearly linked to a desire for better East-West relations.

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[17] 6⅜% and 6⅝%, respectively, on each of the two disbursals of 500 million DM, including the 1% over Libor. 100 million DM of principal is due each half year.

[18] Andreas Meyer-Landrut, since October 1980 the West German ambassador to the Soviet Union.

In September of 1983, following the first loan and clearly hoping for another, the GDR eliminated its currency exchange requirements for visitors under the age of 15. Border guards became conspicuously friendly, and some of the automatic shrapnel weapons mounted at the border were dismantled (some say merely replaced). These concessions were once again publicly interpreted by Bonn as important signals of qualitative improvements in relations between the two countries; privately, it was once again difficult to mask the disappointment in what was considered as clearly insufficient measures. In November GDR officials did approach the FRG about the possibility of obtaining another loan or credits from West German banks. At the time, Bonn seemed unwilling to guarantee further untied credits until the GDR had produced more substantial humanitarian concessions. Moreover, West German businessmen complained that the earlier loan had gone simply to pay off debts to other Western countries, and had led to no increased trade with the FRG. Consequently, there were some reports during late 1983 that the GDR might be interested in substantial one-year supplier credits denominated in VE, as a compromise solution.

If such credits were forthcoming, or indeed another hard-currency loan, the asymmetrical economic benefits of the inter-German relationship would again become an issue of contention. One should not underestimate, however, the cumulative impact of the political concessions made by the GDR, however inadequate they appear on an individual basis. The contacts between citizens of the two states are indeed substantial when measured against the conditions which prevailed in 1972 when the Basic Treaty was signed, and those contacts have been a real burden for the East German leadership.

From a larger perspective, the Germans suffer most from the division of Europe because it also means the division of Germany. In this respect, West German policies towards the GDR and towards the Soviet Union and Eastern Europe are mutually reinforcing. From the viewpoint of the FRG, improved relations with the GDR both require and foster improved relations with the East in general. In this regard, the FRG considers itself to be a driving force of East-West cooperation and of peace in Europe. That it could become such a driving force reflects perhaps a gradual reduction of influence in Europe by the two superpowers as well as genuine concern about the overall deterioration of East-West relations. Meanwhile, it will continue to succor and subsidize the East German state to make the division more bearable, and actively seek the pan-European solution on which, it believes, eventual reunification depends.

APPENDIX I: THE SWING

The swing is an interest-free overdraft facility established in 1949 in the Frankfurt Agreement (a predecessor to the Berlin Agreement of 1951, on which East-West German trade relations are now based). Its purpose was to facilitate the two-way flow of goods and services by preventing trade flow interruptions resulting from temporary imbalances in the bilateral exchanges. The annual maximum level established for the swing cannot be surpassed; the balance must be reduced once the swing is fully utilized before it can be utilized anew.*

The permissible swing level was initially set at 16 million VE in 1949, and during the 1950s ad hoc efforts were made to adjust the swing in response to increased levels of trade. Thus in 1951 the swing level was set at 30 million VE; it increased gradually to average 40 million VE per year throughout the decade.

In 1960, it was agreed to set the swing at 200 million VE through 1968, and to settle imbalances annually by cash payments at mid-year. But when the first cash payment was to be made, in mid-1963, the GDR had a rare surplus (as again in May 1967, when the FRG used the swing to a maximum of 40 million VE). Subsequently, the FRG never insisted on enforcing the provision, and in fact waived its claim to the annual settlement of imbalances in December of 1968, as part of a package of new agreements.

In 1969 the swing was dynamized by annually setting its level at 25% of the value of GDR exports in the preceding year. Growth of the two-way trade had been slow during the 1960s, and the Kiesinger-Brandt government had hoped, by dynamizing the swing, to increase trade and contracts with the GDR. This goal was considered so important that the new swing agreement was signed in December 1968 in spite of GDR actions six months earlier to impede traffic to Berlin, and in spite of the August 1968 intervention of Warsaw Pact troops in Czechoslovakia. Dynamization of the swing contributed substantially to the 58.6% increase of exports to the GDR in 1969, and to further increases thereafter. The swing rose from 360 million VE in 1969 to 790 million VE in 1975.

The dynamized swing was replaced during the second half of the 1970s by setting its maximum level at 850 million VE from 1976 through 1981. Thereafter, in the absence of further agreement, it was to fall to a level of 200 million VE. Were one to return to the dynamized arrangement, in 1982 the swing level would have been 1.5 billion VE!

A new agreement had not been reached by the end of 1981, but both sides agreed to a half-year (subsequently full-year) extension of the 850 million VE level during further negotiations. The negotiations centered on the de facto linkage, subsequently denied by both sides, between the continuation of the swing at relatively high levels and a reduction of currency exchange requirements for West German visitors to the GDR, which East Germany had sharply increased in October of 1980. The GDR did not yield on the issue, but perhaps partly because the FRG authorities did not wish to negatively affect the significantly expanding trade between the two countries, the swing was not reduced to 200 million VE. It was agreed to incrementally reduce swing levels to 770 million VE in 1983, 690 million VE in 1984, and 600 million VE in 1985, when a new swing agreement would be negotiated. (In equivalent terms, at 1983 exchange rates, a fall from around $340 million in 1982 to around $240 million in 1985.)

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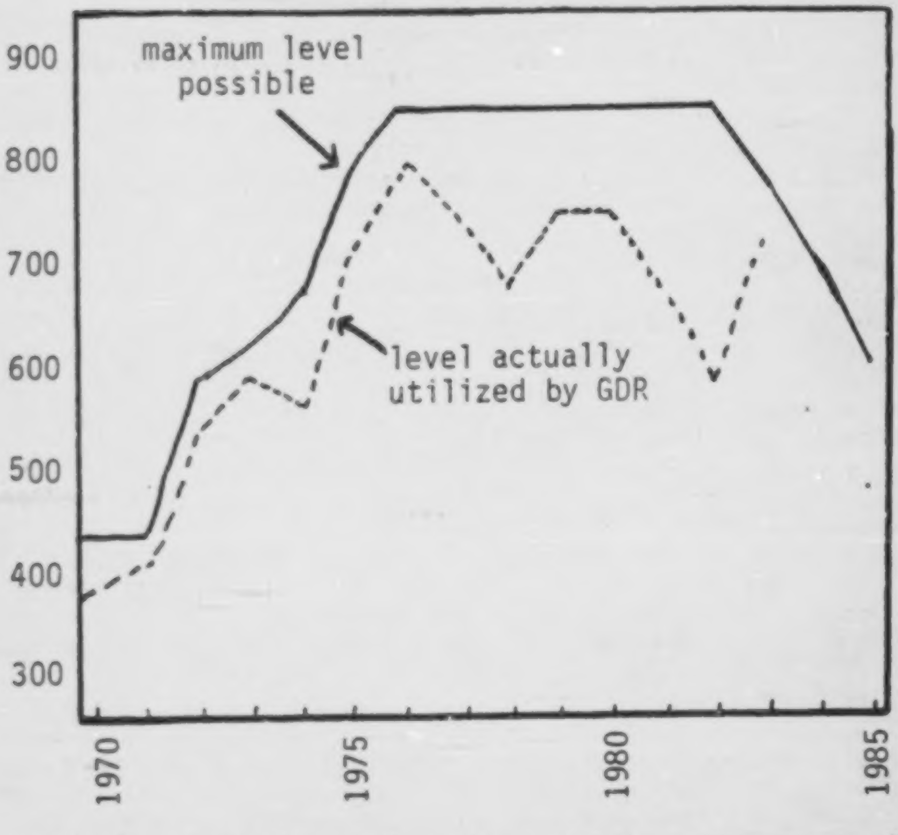
*Some mistakenly interpret the swing as a deficit which can be accumulated year by year.

Figure A-1

E-W German Swing Arrangement

(VE millions)



With the rarest of exceptions, the swing has never swung. In fact, the GDR's use of the swing when it was running surpluses during the early 1980's was at a much higher level than before 1975, when it was running substantial deficits. This unilateral use of the swing suggests that its original function of preventing trade blockages due to temporary imbalances no longer holds. The GDR clearly uses the swing instead to save interest payments. And the higher the swing climbed with increasing trade and the more it became permanently entrenched as an interest-free credit facility for the GDR, the stronger was the temptation for the FRG to use the swing for political leverage.

Table A-1 reflects the economic significance of the swing to the GDR.

TABLE A-1.—SWING UTILIZATION

Year	Swing limit (VE m)	Swing use (VE m) [1]	Swing use (percent)	Cumulative deficit of GDR (VE b) [2]	Share of deficit financed by swing (percent)
1970	440	387	88.0	1.35	28.7
1971	440	413	93.9	1.20	34.4
1972	585	539	92.1	1.75	30.8
1973	620	592	95.5	1.75	33.8
1974	660	559	84.7	1.91	29.3
1975	790	711	90.0	2.39	29.8
1976	850	786	92.5	2.58	30.5
1977	850	748	88.0	2.97	25.2
1978	850	677	79.6	3.68	18.4
1979	850	748	88.0	3.91	19.1
1980	850	745	87.6	3.87	19.3
1981	850	676	79.5	3.65	18.5
1982	850	582	68.5	3.70	15.7

[1] Annual average.

[2] Including goods and services, less cash payments through the special S account.

Source: Columns 2 and 4 from the Statistical Office in Wiesbaden, as reported in Wochenbericht October 1983 of the DIW.

Based on OECD consensus rates for official credits, the GDR could have saved nearly 100 million DM in interest payments in 1982 alone, assuming full utilization of the swing and the use of official credits. Savings would not have been so great given the alternative of Euromarket or supplier credits, cheaper than the 12% official credits. In actuality, from 1970 through 1982 the GDR utilized the swing to the extent of 8.2 billion VE. At an average interest rate of 8%, the GDR thereby saved 658 million DM in interest payments, for an average annual savings of over 50 million DM.

Table A-1 reveals also that the economic significance of the swing for the GDR is declining in relative terms. In the first half of the 1970s, the swing financed 30% of the GDR's accumulated deficit vis-a-vis the FRG. That share dropped to below 16% in 1982, meaning that the GDR was financing more than 80% of its existing obligations at commercial rates. But the commensurately low level of swing utilization (68.5% instead of around 90%, as customary) meant paying interest on commercial credits of 174 million DM and 268 million DM in 1981 and 1982, respectively, in excess of strictly defined needs.

A key to why this occurred is found in the fact that after the new swing agreement was reached, the GDR rapidly increased its use of the swing, until by summer 1983 it was using the facility to the full, which by then had been reduced to 770 million VE. It appears that, in spite of record high interest rates and a precariously high-currency debt, the GDR reduced its level of swing utilization in 1981 and 1982 precisely to strengthen its bargaining position in the 1982 negotiations on renewing the swing, and thereby to reduce the leverage of the FRG negotiators, whose plans to demand political concessions were well known in advance. A contributing factor might have been the contention of some, that the GDR was trying to prove its credit-worthiness to the international banking community. That is not a convincing argument in itself. Even less convincing is the contention that the GDR was simply reserving some swing capacity as a safety valve in case that sudden bottlenecks emerged; the rate of underutilization was clearly too great for that. What is clear, is that the swing has assumed a highly political significance for the FRG which was not envisioned in 1949, and that its economic benefits to the GDR have been substantial.

Appendix II: The EEC and the Special Status of FRG–GDR Trade Relations

The Treaty of Rome, which established the EEC in 1957, contains a special protocol exempting West German trade with the GDR from EEC jurisdiction and consequently from EEC tariffs, duties, and quotas applicable to trade with third countries.[1] That protocol, signed when no EEC founding member officially recognized the GDR, has increasingly been viewed with mistrust by some EEC members. Complaints have become more frequent since the early 1970s as West German imports from the GDR substantially increased, as other EEC members began to compete strongly for East European markets, and as EEC protectionist sentiments strengthened in the very sectors potentially affected by East German exports (e.g., chemicals, textiles, and agricultural products). The complaints are based mainly on allegations of misuse of the special status of East-West German trade, on the potential for market disruptions, and on what is considered to be an innately unfair competitive advantage for both German states.

In principle, the special status of FRG–GDR trade applies only to goods of German origin.[2] It has been alleged that the GDR illicitly reexports to the FRG goods which it imports from other (mainly CMEA) countries. This did occur in 1979, when West German importers received South Korean and Taiwanese textiles from the GDR without paying the 14% customs duty and 12% import tax. Since this violation of both the EEC protocol and the Berlin Agreement, on which the protocol is based, the FRG has strengthened its controls, frozen quotas for textile imports from the GDR, and begun to submit periodic reports to the EEC on its trade with the GDR—in spite of the official position that "intra-German trade" is a domestic affair and thus beyond the scope of EEC supervision.

A related allegation is that West German firms illicitly export to EEC countries goods which originate in the GDR, potentially disrupting the market, and in any event allowing the GDR, through the "Prussian gate", to circumvent the tariffs and duties mandatory on trade between the GDR and EEC countries other than West Germany. These complaints stem mainly from the chemicals and heavy machinery sectors. The EEC Parliament has accepted the FRG's official position that the FRG reexports (legally) to other EEC members only 0.8% of its imports from the GDR, representing only 0.02% of total FRG exports to the EEC.[3] To be sure, in some cases, the determination of origin or end-user is inherently difficult, as in the case of bulk commodities. And even if the safeguard procedures themselves were fully reliable, they cannot address the situation in which goods normally produced for the domestic market might be replaced by substitutes from abroad, thus making the domestically produced goods available for export.

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[1] A special GATT protocol similarly permits the FRG to receive duty-free imports from the GDR without violating the principle of most favored nation treatment.

[2] An FRG–GDR agreement of January 1983 provides that goods of foreign origin can be delivered to the GDR through 1985 up to 8 million VE annually, and 5 million from the GDR. As earlier, foreign goods may be received for upgrading (contract processing), up to 10 million VE annually. See: Berliner Wirtschaft (January 21, 1983), 78–81.

[3] EEC Parliament, Sitzungsdokument 1-531/82 (July 28, 1982).

Incidents of purely illicit reexporting are found world-wide, because irresponsible merchants are found world-wide. Of greater concern are the semi-legal and fully legal practices which allegedly create an unfair competitive advantage for the two German states. Goods legally identified as of West German origin, for example, may be fully subcontracted to the GDR in order to take advantage of lower labor and production costs. These products, mainly consumer goods, are then free to enter other EEC countries from the FRG tariff-free. West German importers of goods from the GDR are granted tax advantages of around 11% as well as the exemption from EEC import duties of around 10%; West German exporters of goods to the GDR pay a value-added tax of 6%, less than half the normal VAT applicable to genuinely domestic trade. These advantages became more a source of controversy at the beginning of the 1980s, when the GDR began consciously shifting its purchases from other Western to West German suppliers.

Bonn is sensitive to complaints by other EEC members regarding the special status of FRG-GDR trade relations. The increasing number of complaints would not be of major concern if they derived mainly from normal protectionist sentiments inevitably emerging during periods of economic stagnation. The more serious concern of Bonn is political. The signing of the Basic Treaty in 1972 technically does not violate the FRG's principle of "one German nation", but it did go a long way in recognizing the GDR as a sovereign state. The GDR subsequently gained full recognition by most countries in the world, including those of the EEC, and the process of normalization of GDR relations with the West proceeded apace. Although no Bonn Government can consider even negotiable with its allies the special status of FRG-GDR trade and economic relations, the political understanding underlying the special protocol has weakened subtantially. That protocol will be surely accepted as long as the economic costs are not great, and it remains at least a means through which the FRG reminds its allies of its claims to reunification, however remote the reality.

SELECTED SOURCES

Most of the information gathered for this paper stemmed from two sources: the West German press (mainly Die Frankfurter Allgemeine, Die Sueddeutsche Zeitung and Die Welt), and the excellent Wochenbericht series of the DIW in West Berlin. Other sources include:

1. Siegfried Kupper, "Political Relations with the FRG," in GDR Foreign Policy, ed. Schulz et al (Armonk, New York: Sharpe, 1982), 261-321.

2. Horst Lambrecht, "The Development of Economic Relations With the FRG," in GDR Foreign Policy, ed. Schulz et al (Armonk, New York: Sharpe, 1982), 322-346.

3. Horst Lambrecht, "Innerdeutscher Handel" in DDR und Osteuropa (Opladen: Leske, 1981), 161-166.

4. Arthur A. Stahnke, "The Economic Dimensions and Political Context of FRG-GDR Trade," East European Economic Assessment, a compendium of papers submitted to the Joint Economic Committee, Congress of the United States (Washington, D.C.: GPO: 1981), 340-375.

5. Wilhelm Bruns, Deutsch-deutsche Beziehungen (Oplade: Leske, 1982).

6. Doris Cornelsen, Horst Lambrecht, Manfred Melzer, and Cord Schwartau, Die Bedeutung des Innerdeutschen Handels fuer die Wirtschaft der DDR—eine Analyse am Beispiel ausgewaehlter Lieferungen und Bezuege der Bundesrepublik Deutschland (Berlin: Deutsches Institut fuer Wirtschaftsforschung, 1982).

AGRICULTURAL PERFORMANCE AND PROSPECTS IN THE GERMAN DEMOCRATIC REPUBLIC DURING THE EIGHTIES

By Thomas A. Vankai*

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I. INTRODUCTION AND SUMMARY

A. Introduction

Agricultural imports of the German Democratic Republic (GDR), have exceeded $2 billion annually since 1978. Grains and feedstuffs (principally oilmeals)—of which the United States has been a significant supplier—have accounted for two-fifths of these imports, however, in recent years, high officials in the GDR have stressed the importance of reducing grain imports.

This paper evaluates the GDR's potential for achieving this policy goal. It reviews the country's agricultural economy in the seventies and projects it's course during the eighties. Particular emphasis is put on the feed-livestock relationship. A short discussion of the food and feed industry is also included.

The GDR statistical yearbooks are the historical data source. Official plans available for 1985 are considered. The projected figures are adopted from the USDA/ERS publication "Eastern Europe: Agricultural Production and Trade Prospects through 1990", FAER-195, February 1984.

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B. Summary

The share of agriculture in the GDR's net domestic production averaged 8.8 percent during 1976–80. This share is likely to be maintained during the eighties in view of the Government's objective of increasing food self-sufficiency. The official plan calls for yield increases of all crops. However, a production target is available only for grains—10.4 million tons by 1985. This compares with 10.0 million tons produced in 1982 and 1983, the highest results so far.

Improved productivity is the basis of expected production growth, because the labor supply will remain stable, the agricultural land area will decline, and investments are expected to increase only slightly. Crop production will receive priority in investment allocation over the livestock sector to cut the gap between domestic supply and demand for feed. A shift of 120,000 ha. to grains presently used for potatoes and sugar beets should assist the fulfillment of the grain production target.

The Eastern Europe-USSR Branch (EE-USSR) projects 10.2 million tons of grain production by 1985 and 10.9 million by 1990, somewhat less than the GDR objective because it deemed as doubtful that planned shifts in land use to grain will be accomplished.

The domestic use of grain is projected at 13.7 million tons in 1990, implying that the GDR will remain a market for over 3 million tons of grain annually during this decade. Production of rapeseed, the only sizable protein-rich crop cultivated, may increase slightly from the current 300,000 tons to 325,000. This increase is small to lessen the demand for protein meal import. Based on past trends and on present efforts for improving feeding efficiency, protein meal imports are projected at 1.4 million tons by 1990, up from 1 million tons in 1981.

The feed import projection is based on an expected slow growth of livestock production. Also a saving in feeding concentrates is urged by authorities through turning to more beef production at the expense of pork. However, a similar goal during 1976–80 to step up beef production has not been met. By 1980, pork production was above the plan target while beef production lagged.

The GDR's agricultural policy is influenced by international financial conditions and by strategic considerations of the members of the Council for Mutual Economic Assistance (CMEA). By March 1982, the GDR's hard currency loans amounted to $11 billion and current debt service became a heavy burden on the economy. The annual deficit of approximately $2 billion in agricultural trade in the last 4 years was an important contributor to the indebtedness and correcting this inbalance is in order. The strategic consideration is expressed in the desire to reduce dependence on Western grain which can be used as a political tool.

The need to improve the trade balance is forcing the GDR to promote exports and slow down growth of domestic investments. Investments in agriculture will be concentrated on mechanization and land improvements. Drainage will receive priority over new irrigation facilities. Construction funds will be used for remodeling and completing buildings in progress rather than initiating new projects. Fertilizer application is at a high level. Plans call for quality improvement, not for increased application. Use of plant protection agents, however, is planned to increase 16 to 18 percent during 1981-85 over the 1976-80 level.

Since the planned increase in agricultural output is not substantive enough to eliminate feed imports, the United States will have an opportunity to continue its exports of corn and soybean meal to the GDR, albeit at a level lower than the annual average 1.6 million tons of corn and 354,000 tons of soybean meal during 1976-80.

II. Planning and Organization

A. Planning

The Communist Party sets the economic goals and controls the planning process. Economic goals and selected target figures are published for the 5-year plans and they are updated annually. The present plan is in effect until 1985.

The plan adoption procedure begins with the Council of Ministers' submission of the draft to the People's Chamber. The Chamber discusses the recommendations and makes modifications. The plan becomes law after the Chamber's approval. The national plan is disaggregated and allocated to Districts—the lowest administrative arms of the Government.

Concurrently with the central organs, following the receipt of key macro indicators, all agricultural enterprises are obligated to work out their own plans and submit them to the appropriate office at the District where the enterprise belongs. Should the farm plan conflict with the national goals, the district council and the enterprise manager must negotiate a compromise through an arbitration committee.

The current 5-year plan for 1981-85 was published in December 1981 (6, 12/5/81).[1] The principal macro-indicators of the plan are the growth targets for income, industrial production, labor productivity, and investments (table 1). Planned growth rates just for gross agricultural production and agricultural investment were not published.

TABLE 1.—GDR: PRINCIPAL PLAN INDICATORS

[Percent change]

Item	1980/1975		1985/1980 plan
	Plan	Actual	
National income produced	27-29	22.3	28
Industrial production	34	27.9	28
Labor productivity [1]	20-44	([2])	29
Agricultural production	15	1.2	([2])
Monetary income	20-22	20	20
Investment [3]	31	28	2.7

[1] In socialized industry, the range indicates variations by type of industry.
[2] Not available.
[3] 1976-80/1971-75.

Sources: [6, 12/15/81], [10].

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[1] Numbers in parentheses refer to references cited at the end of this report.

The official target for 1985 crop production is expressed in grain equivalent.[2] Yield targets for grain, sugar beet, and potatoes are also published, and a 10.4 million ton grain production goal was announced for 1985. The livestock production goals are set in quantities of slaughter animals, milk, eggs, and wool to be sold by the farms to State purchasing agencies.

The national income growth plan of 28 percent for 1981–85 is the same as was planned for 1976–80. Actual growth during 1976–80, however, was only 22.3 percent. Nevertheless, this lower-than-planned performance compares favorably with the achievements of other East European countries. In view of the expected modest growth of investments during the current plan period, the national income growth plan for 1981–85 is based on improved labor productivity and savings in the use of energy and other raw materials in unit production. The planned 20 percent increase in real income equals the 1976–80 results.

During 1976–80, agriculture contributed 8.8 percent to the net production of the whole economy. Agriculture's share of total investment was 10.6 percent, and its share of labor force was 10.7 percent. For 1981–85, no planned change in these ratios has been published. A stabilization in the number of workers engaged in agriculture is likely as funds are scarce to provide mechanical replacement for human labor.

B. Organization

The trend of enlarging agricultural management units has stopped in recent years. The functional division of enterprises into crop producing and livestock producing units was completed by 1975. Apparently earlier plans for establishing huge standardized livestock holdings in the specialized livestock farms with 2,000 cows, 10,000 to 15,000 feeder cattle or 75,000 to 150,000 hogs each, were abandoned. Higher health hazards associated with too large single units and inadequate capital earmarked for new shelters halted this program.

The GDR now has a large variety of agricultural enterprises, including state farms, cooperatives specialized in crop production or livestock production, mixed cooperatives, and interfarm conglomerates. The number of specialized livestock cooperatives declined to 2,900 by 1980 from 4,574 at the inception of the program in 1975. The 1,047 crop producing cooperatives cultivated an average 4,800 ha. in 1980 compared with 5,800 mixed farms cultivating 1,000 ha. each in 1975 (8). The reorganization of cooperatives and the joint ventures among cooperatives and between cooperatives and state farms may ultimately lead to the disappearance of the cooperative type of farming. In 1982, a new statute for cooperatives was published with changed regulations to fit the new organizations.

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[2] To obtain a common denominator all crops produced are converted to grain equivalent. Conversion factors used are the same as published in "Statistisches Jahrbuch ueber Ernahrung, Landwirtschaft und Forsten," Federal Republic of Germany.

A unique feature in the GDR is that the wholesale purchase, transport, storage, and application of chemicals are the responsibility of agro-chemical centers. In 1980, each of the 258 centers serviced an average of 22,700 ha. with a total labor force of 26,000. This specialized approach led to better scientific allocation of fertilizers based on recommended doses calculated by computers (5). Land melioration and machine maintenance are also separated from the producing enterprises. About 15,000 people, some in small and some in large organizations are involved in land improvement activities. Close to 70,000 people service and repair machinery (3).

III. Agricultural Production

A. Crops

The final version of the 1985 plan sets the crop production target at a range of 4.37 to 4.42 tons of grain equivalent per hectare and calls for a shift to grains 120,000 ha. of land presently used for potatoes and sugar beets (1, 5/13/82). Increasing yields of grains, potatoes, sugar beets, and forages are the primary objectives toward reaching production goals. Shifting area from potatoes and sugar beets to grains, however, is preconditioned by attaining potato and sugar beet yield targets.

The grain yield target of 3.95 ton/ha. for 1985 is more realistic than the 4.1 ton/ha. goal set for 1980 in the preceding plan (table 2). If both the area and yield targets are attained then the total grain production would reach 10.4 million tons. This compares with an average 9 million tons in 1976–80 and with a record 10 million in 1982 and 1983. Anticipating a slowdown of the rate of increase in domestic demand for grains and a stable supply of nongrain feed, a 10.4 million ton output would allow the GDR to reduce grain imports by 400,000 tons.

The GDR goal for increasing its grain production is longstanding. Actual performance, however, was below expectation during 1976–80. Despite a 5-percent increase in sown area, production increased only 4 percent compared with the 1971–75 output because yields declined one percent. This decline in yield during 1976–80 is an aberration and it is not considered to signal a change in trend. The decline is attributed to extreme weather conditions in 1976, the driest growing season in 100 years. However, stagnation in growth of inputs, notably a decline in use of fertilizers, probably also contributed to the lackluster performance.

The plan for increasing yields by 1985 relies on improved efficiency in use of available resources and on introduction of higher yielding, more resistant varieties. The planned yield increase is not out of reach, but the planned area expansion is not likely to be obtained and thus production is projected at 10.2 million tons by 1985, and 10.9 million tons by 1990 (table 2).[3]

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[3] Refer (2) for projection methodology.

TABLE 2.—GDR: AREA, YIELD, AND PRODUCTION OF PRINCIPAL CROPS

Item	Grains	Rapeseed	Potatoes	Sugar beets
1,000 hectares:				
Area:				
1971–75 average	2,397	118	633	232
1976–80 average	2,524	122	565	260
1985 plan	2,630	(1)	(1)	(1)
1985 trend [2]	2,697	124	494	261
1985 projection	2,585	125	494	260
1990 projection	2,600	125	450	260
Tons/hectare:				
Yield:				
1971–75 average	3.62	2.24	17.02	27.97
1976–80 average	3.58	2.36	17.56	26.91
1985 plan	3.95	(1)	22.00	33.00
1985 trend [2]	4.25	2.80	18.00	28.80
1985 projection	3.95	2.50	18.00	30.50
1990 projection	4.18	2.60	18.50	32.00
Production: [3]				
1971–75 average	8,678	268	10,806	6,481
1976–80 average	9,038	291	9,873	6,996
1985 plan	10,400	(1)	(1)	(1)
1985 trend	11,470	347	8,892	7,517
1985 projection	10,200	310	8,900	7,930
1990 projection	10,860	325	8,325	8,320
Annual average change (percent):				
Yield:				
1976–80/1971–75	−0.2	1.0	0.6	−0.7
1985 projection/1976–80	1.4	1.0	.3	1.8
1990/1985 projection	1.1	.8	.5	1.0

[1] Not available.

[2] Linear trend based on observations for 1960–1981.

[3] Computed through multiplying area by yield.

Sources: (1, 5/16/82), (6, 4/18/81, 12/5/81), (8).

The GDR has more problems with the supply of protein-rich feed than with carbohydrates. Rapeseed is the only protein-rich crop produced in significant quantity, about 300,000 tons annually during 1980–82. Since no special plan target is published for oilseeds, no important change in their area and production is expected. Production stabilization is justified by the limited feed value of rapeseed and unsuitability of the GDR climate for sunflower seed or soybeans. To reduce the protein shortage, the GDR officials recommend growing more pulses and more of the wheat varieties with 14 percent raw protein content.

Potato production has a declining trend. The 1976–80 production was 9 percent less than during 1971–75, representing continued decline but at a decelerated rate compared with the declines between preceding 5-year periods. The plan aims at stabilization of current output through increasing yields to 22 ton/ha. on a reduced area. A similar goal of higher yields—33 tons/ha.—on smaller acreage is set for sugar beets.

EE/USSR Branch projects a slight increase of rapeseed production to 310,000 tons by 1985 and 325,000 by 1990, but anticipates less than planned yield increase for sugar beets. Potato production is projected to continue its declining trend.

B. Livestock

In Eastern Europe, the GDR has the most cattle and hogs per hectare of agricultural land (table 3). No plan for inventory change has been announced; only targets for livestock product procurement are published. These targets indicate goals for total output as procurement account for about 95 percent of the produced slaughtered livestock and milk, 85 percent of eggs and 99 percent of wool.

The 1985 procurement targets are modest. Compared with 1976-80 accomplishments, procurement of meat is to grow at an annual rate of 1.3 percent during 1981-85, eggs—1.4 percent and milk procurement should decline slightly. The growth of output of these commodities is projected at the planned growth rate of procurement until 1986, but at a slower rate between 1986 and 1991.[4] The growth of livestock production is likely to be sustained without raising the number of animals only through more efficient management (table 4).

Compared with the preceding five years, meat production in the GDR grew more than 4 percent annually during 1971-75 and continued to grow faster than planned at a rate of 3.6 percent during 1976-80 (table 5). The fast growth of livestock production generated additional demand for feed, beyond the domestic supply capacity. Substantially increased grain imports covered the gap between domestic feed requirements and production. Difficulty in financing feed imports is the principal reason for the planned slower growth rate in livestock sector during 1981-85. Reduced grain imports during the eighties should induce the farms to adhere to the livestock production plans more rigidly than during 1976-80.

TABLE 3.—GDR: LIVESTOCK INVENTORY [1]

[In millions]

Item	1971-75	1976-80	1981	1982	Unit/ha
Cattle	5.39	5.54	5.72	5.75	0.92
Cow	2.16	2.14	2.14	2.12	.34
Hog	10.48	11.68	12.87	12.87	2.06
Sheep	1.69	1.92	2.04	2.17	.35
Poultry	44.65	49.10	51.61	54.39	8.68

[1] November census of preceding year.

Source: (8).

TABLE 4.—GDR: OUTPUT OF LIVESTOCK PRODUCTS [1]

[In thousands of tons]

Item	1971-75	1976-80	1981	1982	Projection	
					1986	1991
Total meat	1,506	1,797	1,978	1,813	1,990	2,050
Pork	998	1,198	1,358	1,215	1,355	1,390
Beef	383	447	452	440	463	484
Poultry	113	137	149	140	152	155

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[4] Livestock product projection is lagged one year behind crop production projection, because of better correlations of livestock output with feed supply of preceding year.

TABLE 4.—GDR: OUTPUT OF LIVESTOCK PRODUCTS [1]—Continued

[In thousands of tons]

Item	1971-75	1976-80	1981	1982	Projection 1986	Projection 1991
Mutton	12	15	19	18	20	21
Milk [2]	7,715	8,155	8,202	7,700	8,100	8,100
Million units:						
Eggs	4,690	5,287	5,670	5,700	5,900	6,050

[1] Meat in carcass weight including edible fat and offals.
[2] In 3.5 percent fat content.

Sources: (2), (8).

TABLE 5.—GDR: LIVESTOCK PRODUCTION GROWTH RATE [1]

[In percent]

	1976-80/1971-75	1986/1976-80	1991/1986
Total meat	3.6	1.3	0.4
Pork	3.7	1.5	.3
Beef	3.1	.5	.6
Poultry	3.9	1.3	.2
Mutton	4.6	3.6	.6
Milk	1.1	-.4	0
Eggs	2.4	1.4	.3

[1] Annual compound growth rate.

Livestock production growth during the current plan period must be generated by improved productivity with the help of introduction of genetic advances and reduction of mortality rates. A gradual shift to beef and slow growth in pork production should lead to a reduction of concentrated feed use per kilogram of meat output.

IV. INVESTMENTS AND INPUTS

The gradual transformation of the GDR's agriculture to large specialized enterprises using industrial production techniques has been absorbing a considerable amount of investments. The industrialization of agriculture has involved a large influx of new machinery and construction of new buildings. Because of financial constraints investment growth during 1981-85 cannot continue at the past pace. Instead of starting new projects, outlays must be concentrated on reconstruction of existing buildings to make their use more efficient.

A total investment of 256 billion marks is earmarked for the whole economy during 1981-85.[5] This represents a small increase of 2.7 percent (constant prices) over the 1976-80 investments. Since no sectoral allocation of the planned investments is published, it is not known whether agriculture's share of 10.6 percent in recent years will be maintained. The continued policy of heavily subsidizing domestic food consumption and improving the self sufficiency level in food, however, is an indication that agriculture cannot be neglected and will continue to receive its past share in investments during this decade.

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[5] $1=3.30 marks.

Investment priorities will be given to crop production, particularly for improving grain combine harvesting techniques and reducing transport and storage losses. Investments in the livestock sector during the eighties will be concentrated on mechanization. While crop cultivation is almost completely mechanized, there is much to be done in the livestock sector, here only 20 percent of the animals are presently sheltered in up-to-date stalls. The share of funds allocated to new construction, however, will be reduced to 25 percent of total investments from the 58 percent share during 1976-80 and as a consequence, existing facilities will be renovated and modernized rather than new buildings erected (6, 4/18/81).

The planners envision that efficiency in production and thrift in raw material use will generate industrial growth of 28 percent during 1981-85, and thus industry will be able to supply agriculture with the needed building materials, new machines, spare parts, and chemicals. The machine industry has been instructed to divide its output in a proper ratio between new machines and spare parts.

A. Chemicals

The chemical industry's task is to increase output of nitrogen fertilizers by 27 percent between 1980 and 1985 to 1.2 million tons, presumably for both domestic use and exports. The mining of potash is slated to level off, but potash fertilizer production should double as it is more profitable to export the fertilizer than the base mineral.

During 1976-80, combined application of fertilizers (N, P_2O_5,K_2O)—336 kilograms per 1 ha. arable land—was 2 percent less than in 1971-75. The use of potash declined 20 percent, phosphate 2 percent, but the use of nitrogen increased 14 percent. The change in components reduced the share of potash in total fertilizer use from 37 to 30 percent. We assume that the shift in ratios among the ingredients was the result of widespread soil testing and was not detrimental to crop yields.

The use of plant protection agents (active substance) increased about one-fifth from 1971-75 to 1976-80 and averaged 5 kg. per 1 ha. of arable land annually. The production of plant protection agents should grow 16 to 18 percent during 1981-85 permitting increased application unless imports will be restricted.

In the coming years, more attention will be turned to the preservation and use of organic fertilizer which has an important role in upgrading soil quality. Also, because of their retention of nitrogen in the soil and relatively high protein content growing more legumes both as main crop and as second crop is advocated.

B. Land Improvement

During the current plan period land improvement has been concentrated on drainage. Funds for irrigation were spent on maintenance and repair rather than expanding irrigable land area. Calculations made in the GDR indicate that yields can be raised with less cost by draining land than by irrigating an equal area.

By 1980, the GDR had 919,000 ha. of irrigable land and 1.5 million ha. was drained. Continued drainage installations would be especially beneficial to some pastures, but less new area was drained and installed with irrigation equipment during 1976–80 than during 1971–75. No specific land improvement area target was published for 1981–85. The enterprises are requested to use existing irrigation facilities more efficiently to save 10 to 15 percent of water and reduce energy consumption during the present plan period (4).

C. Energy Saving

Investments in infrastructure have been concentrated on enlargement of seaport loading capacity and shifting transportation from roads to railroad and inland waterways. Road transportation entails too much tractor use with high fuel consumption while tractors could be better utilized for field work. Coal will gradually replace oil as the chief energy source. This shift should save fuel cost for heating and drying.

V. FOOD AND FEED INDUSTRY

In the GDR, the food and feed industries are considered as an integral part of the agricultural sector and the output of the food industry is included in the agricultural performance index. During 1976–80, the food industry developed as planned, production increased 14.5 percent compared with the 1971–75 level and its share in the total industrial output was 17 percent. The rate of growth was largest in the output of nonalcoholic beverages—35 percent. Processed meat production was up 26 percent, the growth of bakery products, cocoa products, and beer output exceeded 14 percent.

A 13 to 15 percent growth of processed food production is planned for 1981–85, less than the planned increase for total industrial production. This growth in output should boost domestic consumption, satisfy recommended nutritional norms and provide an increased share of processed convenience food in the daily diet. The development of new products in this category is planned to be stepped up. Construction, however, will be permitted only for completion of buildings in progress and remodeling of existing factories. Bakery plants will receive top priorities for remodeling.

Emphasis will be placed in the future on improved handling and storing of perishable food to reduce losses, enlarging warehouse facilities and streamlining distribution. The remodeled factories will be equipped with micro computers, robots, and mechanical handling equipment.

The feed industry consists of mixed feeding plants, straw pelletization, and drying facilities. The past goal of increasing straw pelletization capacity from 1.5 million tons in 1977 to over 3.3 million tons by 1980 was abandoned. High energy cost made the preparation of this relatively low value feed prohibitive. No further expansion is likely in the eighties.

The mixed-feed industry consists of over 100 plants of varying size (7). The plants blend the ingredients in scientifically established rations differing according to the type and age of animals to be fed. The microbiological industry is a sub-branch of the feed industry. This industry is yet in the embryonic stage although agriculture would be an important customer for fodder yeast, amino acids, vitamins, enzymes and antibiotics. Synthetic protein production has a long way to develop before it replaces imported plant or animal protein. At present no synthetic products are produced in commercial quantity.

VI. LABOR, INCOME, CONSUMPTION, AND PRICES

A. Labor

The GDR's population decreased by 80,000 between 1975 and 1980. The number of employed increased during the same period by 3.5 percent, but the agricultural work force declined 2 percent. In 1980, agricultural workers including members of cooperatives accounted for 10.7 percent of the total work force of 7.3 million. Of the total agricultural labor force, 85 percent is engaged in cooperative farming, over 13 percent are state farm employees and less than 2 percent are independent.

Further outflow of labor from the agricultural sector is undesirable because of shortages in peak harvest time, especially in the northern districts. The manpower shortage is expected to be compensated for by increased labor productivity generated through mechanization, scientific education, and improved technical skill of the existing work force.

B. Income

The population's nominal income increased 20 percent from 1975 to 1980 while prices of staples foods and rent remained stable with the help of a 42 percent increase in price support subsides. Average wages for all employed increased 15 percent during the same period but only 13 percent in the agricultural sector, increasing the wage gap between agricultural and nonagricultural workers from 1 to 3 percent. Earnings for cooperative members are not reported. Although the Government guarantees a minimum income to members, their incomes vary substantially because a major portion of total income depends on the income of the enterprises to which the farmers belong. Average per capita income is the highest in specialized livestock farms. The current plan calls for a 20 to 22 percent increase of average income to all workers in the country between 1980 and 1985.

C. Consumption

The growth of income and stable prices of staple food led to considerable increases in per capita food consumption during 1976–80. Total meat consumption increased 15 percent reaching 89.4 kg. in 1980. The largest increase occurred in pork consumption which was up from 48 kg. in 1975 to 57.6 kg. in 1980 (table 6). A further increase in meat consumption is likely if the planned income growth is realized and meat prices remain constant. The rate of growth, however, will decelerate because the income elasticity usually declines at such a high level of consumption.

TABLE 6.—GDR: PER CAPITA CONSUMPTION OF SELECTED FOODS

[Kilograms]

Item	1975	1980	1981
Total meat	77.8	89.5	90.5
Pork	48.0	57.6	58.0
Beef and veal	20.8	21.4	22.2
Poultry	7.6	9.0	9.0
Other meats	1.4	1.5	1.4
Grain (in flour equivalent)	94.8	94.5	95.0
Sugar	36.8	40.6	40.8
Vegetables	90.0	93.8	95.1
Potatoes	142.1	142.7	140.8
Fruits	66.6	71.1	58.0
Butter	14.7	15.2	15.3
Margarine	10.7	10.6	10.5
Vegetable oil	2.0	1.6	1.6
Milk (2.5 percent fat content)	100.8	98.7	99.0
Eggs (numbers)	269	289	290

Source: (8).

The Government may attempt to stabilize meat consumption by limiting the supply of lower quality meat for subsidized prices and marketing more specialty cuts at higher prices. Along with meat consumption, per capita consumption of eggs increased by 20 between 1975 and 1980 to an annual 289. Milk consumption declined slightly and the already high butter consumption rose somewhat. Consumption of fish declined slightly, but vegetable consumption was up. Potato and flour consumption remained fairly steady pointing to no substitution of starchy food with protein but to an increase in calories consumed. Dietary changes during the rest of the eighties will likely be apparent in nutritional improvement rather than in higher food consumption.

D. Prices

Prices are fixed by the State. Procurement, retail, and export prices are set independently of each other and are used as tools to further economic, political, and social objectives. Procurement prices and the relationships between them influence farm managers to produce a mix of commodities conforming with state plans. Procurement price changes between 1975 and 1980 included a 3.8 percent rise for wheat while barley prices were reduced 2.5 percent. Slaughter cattle prices were up 6.4 percent, excluding bonuses, while slaughter hog prices were down 4 percent and slaughter poultry prices were down 10 percent.

Procurement prices during the current plan period were raised for hides and skins in November 1981 and for sunflower seed, tobacco, and hogs in January 1982. The pattern of periodic and selective price changes is likely to continue. The latest procurement price increases were scheduled to be effective in January 1984. Retail prices of staple foods, however, were not raised. Despite the upward movement of producer prices, the GDR remains the only East European country which intends to preserve the low retail prices of some basic food products at least until the end of 1985.

Small vegetable and fruit growers may sell their products direct to consumers at prices not to exceed 10 percent of officially established limits in state retail stores.

VII. AGRICULTURAL TRADE

The raw material price explosion during the seventies, particularly in the sphere of energy, seriously hurt the GDR economy. The GDR, during 1976-80 had an estimated $8.4 billion trade deficit (9), based on official GDR data, but Western analysts believe this figure to be grossly understated because unrealistic exchange rates have been used in trade statistics (11, #94 11/26/82). Huge agricultural imports during the seventies valued at over $2 billion in 1979 are mainly responsible for the negative trade balance.

The CMEA member countries, especially the Soviet Union, are the GDR's principal trading partners. They accounted for two-thirds of the GDR's foreign trade turnover in 1980 compared with 70 percent in 1975. Trade turnover increased 23.5 percent in value from 1975 to 1980 with the centrally planned countries and 49 percent with the rest of the world (table 7).

In 1981 and 1982, according to the GDR's data, the value of exports exceeded imports with both socialist and nonsocialist trading partners. Nevertheless the hard currency debt accumulated to $11 billion by 1982 (11, #27, 4/15/83). The debt servicing obligation and the difficulty of obtaining new credits will force the GDR Government to restrict imports and stimulate exports during the next several years.

TABLE 7.—GDR FOREIGN TRADE

[Billion valuta mark] [1]

Item	1975	1980	1981
Exports:			
Total	35.1	57.1	65.9
To socialist countries [2]	25.7	39.7	43.6
Imports:			
Total	39.3	63.0	67.0
From socialist countries [2]	26.2	40.1	44.9

[1] $1 = 3.29 mark in 1975, 3.03 in 1980, 3.40 in 1981.

[2] CMEA members, China, North Korea, and Yugoslavia.

Source: (8).

Grain, the GDR's leading agricultural import averaged 3.9 million tons annually during 1976-80. Oilseed meal imports, next in importance to grains, averaged 950,000 tons. Grain imports vary annually depending mainly on domestic production. Imports such as cotton and coffee are influenced by domestic demand manipulated be prices set by the Government.

The fast growing livestock sector and slow growth of feed supplies forced the GDR to spend about $1.2 billion for imported feed in 1980, 45 percent of total agricultural imports (table 8). The Government is urging farm managers to reduce reliance on imported feed through producing more grains, utilizing more nongrain fodder, improving feeding efficiency, and increasing the share of cattle and sheep in livestock holdings at the expense of hogs and poultry. The official goal is a gradual reduction of grain imports to one million tons by 1985, a target not likely to be met.

The GDR is a significant importer also of fruits and vegetables, fats and oils, alcoholic and nonalcoholic beverages, and sugar. It is the leading East European importer of raw sugar from Cuba, of which one-third to one-half is re-exported in refined form.

TABLE 8.—GDR: AGRICULTURAL TRADE VALUES

[In millions of dollars]

Product	SITC code	Imports			Exports		
		1978	1979	1980	1978	1979	1980
Total	(1)	$16,452	$18,384	$21,640	$14,963	$16,610	$19,100
Agricultural products, total	(1)	2,034	2,212	2,556	406	451	512
Live animals	00	(1)	(1)	(1)	99	119	122
Meat and meat preparations	01	34	38	39	134	112	115
Dairy products and eggs	02	10	13	9	34	38	44
Cereals and preparations	04	596	702	844	73	101	118
Fruit and vegetables	05	222	180	213	3	5	6
Sugar and honey	06	98	114	113	18	18	43
Coffee, tea, cocoa, and spices	07	285	281	278	(1)	(1)	(1)
Feeding stuff	08	210	249	320	(1)	3	(1)
Alcoholic beverages	11	116	144	157	18	16	18
Tobacco	12	48	54	73	5	5	8
Oilseeds	22	31	33	39	4	9	4
Natural rubber	23	37	43	55	(1)	(1)	(1)
Textile fibers	26	155	177	216	1	1	1
Vegetable oils	42	160	139	162	5	10	18
Other products	(1)	32	45	38	12	19	14

[1] Not applicable or insignificant.

Sources: Handbook of Economic Statistics 1981, CIA. FAO Trade Yearbook, 1980.

The outlook for higher agricultural imports is clouded by financial constraints. The GDR must improve its trade balance and reduce the burden of debt servicing to maintain its creditworthiness. However, the GDR will have difficulty increasing exports in the next few years to generate additional foreign exchange for raising imports. While operating under financial constraints it is unlikely that the GDR will pursue a policy of increasing feed imports.

Based on the projected meat production, the GDR would require about 13.4 million tons of grain by 1986 (table 9). If grain production is 10.2 million tons by 1985, the grain deficit will be 3.2 million tons, or 3.6 million inclusive of re-exports to West Berlin. A decline in imports of 400,000 tons by 1991 could be expected. The projected protein meal imports (oilseeds, oilmeal and fishmeal in soybean meal equivalent) is 1.37 million tons by 1985/86 and 1.42 million in 1990/91 (2). Feed imports, however, could be reduced if hog holdings are lowered.

The GDR's agricultural exports are relatively small. West Berlin is the leading market for grains, livestock, and meat, and is expected to remain so.

A. Trade With the United States

U.S. agricultural exports to the GDR consist almost entirely of grains and oilmeals (table 10). U.S. agricultural exports peaked at

$534 million in 1980 and averaged $348 million during 1976-80. While the GDR's agricultural imports accounted for only about 13 percent of total imports during 1976-80, 96 percent of all imports from the United States were agricultural. The United States has a good chance to maintain the present share of exports to the GDR because competition for the principal U.S. exports of corn and soybean meal is not anticipated to change.

TABLE 9.—GDR: PROJECTED SUPPLY AND USE OF GRAIN AND PROTEIN MEAL

[In thousands of tons]

Commodity	1985-86	1990-91
Grains:		
Production	10,200	10,860
Domestic use	13,370	13,689
Deficit	3,170	2,829
Protein meal:		
Production	147	153
Domestic use	1,520	1,581
Deficit	1,373	1,428

TABLE 10.—GDR: SELECTED AGRICULTURAL IMPORTS FROM THE UNITED STATES

Commodity	Thousands of tons				Millions of dollars			
	1979	1980	1981	1982	1979	1980	1981	1982
Total	(¹)	(¹)	(¹)	(¹)	$370.6	$534.3	$333.0	$217.8
Corn	1,501	2,766	1,511	1,396	196.6	392.6	224.7	159.6
Wheat	196	252	174	108	35.3	49.5	34.2	16.6
Soybean meal	458	362	208	172	109.0	75.7	58.4	39.0
Other products	(¹)	(¹)	(¹)	(¹)	28.8	16.5	16.7	2.6

[1] Not applicable.

Source: (9).

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HUNGARY

ECONOMIC REFORM IN HUNGARY: FROM CENTRAL PLANNING TO REGULATED MARKET*

By Paul Marer**

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*During the last few years I have had excellent opportunities to discuss Hungary's economic reforms with a large number of Hungarian economists and policymakers as well as experts who do not reside in Hungary. Their candid appraisals and interpretations, made orally and found in their publications, were the most important sources of information and stimuli for the author to seek his own appraisals and interpretations. Since the list of persons to whom a debt is owed is a long one, and since probably no one would agree with all the interpretations, I will let this acknowledgment and expression of thanks be a collective one.

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I. SUMMARY

During the past 25 years Hungary's leaders have pursued gradual political liberalization and introduced significant economic reforms while maintaining party control and a socialist, centrally planned economic system.

Hungary retains a socialist economy because the ownership of the means of production is predominantly non-private, even though the scope for legal private activities has been increasing. It has also retained central planning, but one that is fundamentally different from the traditional, Soviet-type system. The main differences are in the scope and instruments of planning. Whereas in the traditional system planning encompasses both macro and micro decisions, planning in Hungary now focuses mainly on the macro sphere. Whereas in the traditional system the main planning instruments are administrative directives, Hungary today relies primarily on economic regulators, such as prices, exchange rates, incentives, and taxes.

The efficient operation of economic regulators requires a well-functioning market mechanism: significant competition and production guided by profits. The introduction of such a mechanism in an economy that has been operating as a traditional centrally planned system for almost two decades is exceedingly difficult. Even under favorable circumstances, it is a process that takes many years, although in some sectors, notably agriculture, it can be introduced and yields results more quickly.

The transformation of a traditionally planned to a regulated market economy is difficult and time-consuming because:

—Ideological, political, and bureaucratic opposition to the reforms must be overcome.

—The many institutional legacies of the traditional system can be eliminated only gradually because economic disruption would be triggered if, say, prices and wages were allowed to find their equilibrium levels too quickly. In traditionally planned systems prices play practically no role in production and investment decisions, are set arbitrarily, and are maintained at disequilibrium levels in the pursuit of economic stability.

—An important legacy is the bureaucratic mentality of managers. It takes time to reorient them from the center to the market, especially during the long transition period when administrative intervention and the rudiments of a market mechanism exist side by side.

Hungary's economic reforms originated in agriculture in the early 1960s. Successes in agriculture were helpful for the introduction of the New Economic Mechanism (NEM) in 1968; in turn, the NEM made possible further reforms in agriculture also. After 1972 administrative intervention into the economy increased, contributing to balance of payments and other problems that ballooned into a near crisis by the early 1980s, as detailed in the essay that follows this contribution. The problems convinced Hungary's leadership to return to the reform process. A series of reforms were implemented during 1979–84 to return the country to the NEM path and to set the stage for further advances. In 1984 a series of high-level decisions were made to introduce a comprehensive set of new reforms in planning, the institutional structure, and the regulatory system during 1985–87. If implemented as planned, the significance of this new round of reforms may rank alongside the historic NEM.

The traditional centrally planned economic system was maintained by a traditional, Soviet-type political system, where the party apparatus makes all major and many minor economic decisions. In Hungary significant, market-oriented economic reforms were preceded and accompanied by political liberalization that included a relatively open discussion of the economy's problems and alternative solutions and the dissemination of reliable economic statistics. Significantly, the scope and instruments of the party's control over society were changed also, paralleling changes in the scope and methods of central planning. There was a gradual reduction in the party's role in the day-to-day management of the economy (with periods of reversals, to be sure). The party's efforts today are concentrated on initiating or arbitering the decisions that have major political consequences. As the market-oriented economic reform process now unfolds further, a need has arisen to create new political mechanisms to help resolve the conflicts between economic interest groups. In a traditional Soviet-type system the open manifestations of such conflicts are suppressed and decided by the party behind closed doors. Hungary's economic reform process is thus contributing to a limited but significant liberalization of the political process without necessarily diminishing the party's control over the main directions in which the economy and society are evolving.

Hungary's economic reform and political liberalization processes are becoming less and less reversible; barring cataclysmic changes in the foreign policy environment or major economic dislocations at home, they will continue after János Kádár is no longer at the helm.

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Parts II and III present conceptual frameworks for analyzing economic reforms in a CPE. Given the emphasis here that reforms represent a long process of evolution from the traditional CPE system to a regulated market model, the essential features of the former are outlined in Part II, of the latter in Part III, as reference points. These frameworks should help to position Hungary's prevailing economic mechanism in the continuum between a traditional CPE and an efficient, regulated market mechanism, and to compare the reforms in Hungary with those in other countries.

Part IV gives a short chronological account, with assessments, of how Hungary's reforms have evolved between 1956 and 1984. Part V outlines the prospective new reforms of 1985-90, indicating the approximate timetable of implementation. Part VI concludes the study with a discussion of the relationship between economic reforms and political change.

II. Basic Features of a Traditional CPE

A. *The Traditional Central Planning Mechanism*[1]

An economic system is defined by the ownership of the means of production, who has the authority to make what decisions and the flow of information and incentive mechanisms relied on to make them, the planning and regulatory framework, and the structure of economic institutions. The traditional CPE system can be identified by brief statements of its main features.

1. PLANNING

Economic activity at all levels is controlled by the central planning organ of the state and is implemented through administrative directives. Economic organization is hierarchical and decisionmaking centralized, with the government, represented by the planning office, at the top of the pyramid, then the functional and branch ministries, then the regional and intermediate authorities, with enterprises and collective, state and private firms at the bottom of the pyramid. In actual practice different levels in the hierarchy, including enterprises, bargain about production assignments and the allocation of resources to meet them. Production and its disposition are planned primarily in physical units. But because it is not possible to disaggregate the physical plan to cover every good, and to facilitate monitoring performance, plans are also stated in value terms. In some areas central control is exercised through direct orders, in other areas indirectly through rules and regulations.

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[1] This section is based largely on [Bornstein].

2. OWNERSHIP OF THE MEANS OF PRODUCTION

(a) Outside agriculture, all significant means of production are nationalized and state-owned. The logic of the planning system is that the functions of ownership are exercised by the producer's immediate superior authority in the bureaucracy. A small cooperative and tiny private sector may exist also.

(b) In agriculture, there is some mixture of three types of ownership. The dominant pattern is the collective or cooperative farm. However, nearly all aspects of production are under close state control. State farms operate as industrial enterprises. Private ownership of small plots is permitted, but their operations are strictly circumscribed by regulations.

3. RESOURCE ALLOCATION

(a) All means of production are rationed: materials by administrative orders; labor by control over the size, sometimes also the distribution, of wage expenditures; and capital by the central allocation of investment funds, construction materials, and machinery and equipment.

(b) Most basic agricultural products are obtained from state, collective, and private farms through compulsory deliveries; additional quantities may be obtained by relying on price incentives.

(c) Most consumer goods and services are rationed until they are delivered to the retail distribution network; a small (legal, semilegal, and illegal) private market for some goods and services operates also.

4. INDUSTRIAL ORGANIZATION

Production and distribution enterprises can be established only by branch ministries and other government organs. They tend to be large and often have a regional or country-wide monopoly in the activity they are engaged in. Interenterprise relations are "vertical" through the administrative hierarchy rather than "horizontal" through the market. Enterprises do not compete with each other except regarding the fulfillment and overfulfillment of their plan targets.

5. ENTERPRISE MANAGEMENT

The principal duty of the enterprise manager, appointed (along with his deputies) and financially rewarded by the supervising state organ, it to execute plan instructions. The manager wants to retain the benevolence of his superiors in the planning bureaucracy because good paternalistic connections can help him and his enterprise in innumerable ways. To be sure, managerial behavior is subject to many influences. While the reward and penalty system is designed to motivate him to try to overfulfill the plan, the typical manager will be cautious not to overfill it by too large a margin because the production level achieved in one period will be the planner's basis for setting the target for the next period. This is known as the "ratchet effect." This behavior of the planners, combined with impulses generated by cost-plus pricing and the free availability of capital, material, and labor up to rationed levels, will lead to predictable kinds of behavior and habits; insufficient attention to controlling costs and improving productivity; hoarding of capital, material and labor; hiding some reserve capacity from superiors; exerting maximum pressure to obtain additional investment and other resources; preferring convertible-currency (CC) imports; and strong preference to sell on the domestic market where the enterprise is often a monopoly supplier, or on the not-too-demanding markets of the CMEA countries, rather than attempting to penetrate the much more demanding CC markets.

6. PERSONAL COMPENSATION

(a) Wages and salaries are regulated by fixed wage scales established for categories of skill and effort. Each firm's total wage fund is centrally regulated.

(b) Managerial incentives reward the fulfillment and overfulfillment of quantitative production targets.

(c) Farm income is regulated mainly by the prices paid for deliveries to the state, supplemented by small, controlled earnings from sales on the free farm market.

7. THE PRICE SYSTEM

Nearly all prices are fixed at high levels in the planning hierarchy and remain fixed for a long time, in the enterprise sector to facilitate plan construction and ~~help monitor plan~~ implementation, in the consumer sector to avoid open inflation.

(a) Industrial wholesale prices are fixed on a branch-wide cost-plus basis, enabling most branches and enterprises to earn sufficient revenue to cover current costs and to show a small profit. Enterprises that cannot cover costs are subsidized; those with above average profits, taxed.

(b) Agricultural procurement prices are set centrally, usually at low levels relative to the prices of industrial inputs into agriculture. A multiple tier price system may be operating as an incentive to the farm sector to produce and to deliver to the state quantities over and above the assigned quotas, but direct controls and coercion are used also to obtain the supplies.

(c) Consumer prices are supposedly set at market clearing levels for the economy as a whole, e.g., the planned quantities of consumer goods and services valued at retail prices should correspond to the wage bill after taxes, plus net transfer payments, less savings. Actually, the retail price level is frequently lower, as revealed by persistent shortages, resulting in forced savings. Apart from the issue of the general level of consumer prices, there is also the question of their structure. Relative prices often deviate substantially from the structure of wholesale prices, kept apart by a plethora of turnover taxes and price subsidies. Retail prices often do not reflect relative scarcities, which adversely affects consumer welfare. The response of the consumer to prices is approximately the same as in a market economy, although consumer demand as a rule does not influence either the prices facing him or the supply of available goods, unless the authorities pay attention to demand in their production and investment decisions.

(d) Prices of exports and imports in trade with market economies are based on current world market prices; CPEs are almost always price takers. In trade with other CPEs belonging to the Council for Mutual Economic Assistance (CMEA), prices are derived from past world market prices according to a CMEA formula, periodically revised. However, the application of the formula to derive specific prices is determined bilaterally, in the context of negotiations which also decides the types of and quantities of goods that will be traded. The maintenance of autonomous domestic prices from external trade prices means that imports and exports must be subject to some form of price equalization. The price equalization mechanism may be operating through the foreign trade bureaucracy and the central bank. The paper gain or loss will be determined jointly by the quantities of exports and imports, foreign versus domestic price relatives, and the exchange rate; the net amount will be an income or expenditure item in the state budget.

8. EXCHANGE RATES

Given administrative controls over economic transactions and the autonomy of domestic prices, exchange rates do not play a role in resource allocation in the enterprise sector. Exchange rates do not effectively link foreign and domestic prices and may be quite arbitrary. Different types of exchange rates may be published; generally the two most visible ones are:

(a) The official exchange rate, used to convert export and import transactions into domestic currency units. Since exports and imports are mandated by the plan, the exchange rate affects only the profits and losses of foreign trade enterprises, but that has only accounting significance.

(b) The noncommercial exchange rate, for tourists and private remittances, functions similarly to exchange rates in a market economy, although most of the underlying transactions are directly controlled.

9. EXTERNAL TRANSACTIONS

(a) Trade is conducted only by special export-import firms called foreign trade enterprises (FTEs). Producing enterprises have no direct contact with foreign customers and suppliers. Their interest in foreign trade, especially exports to the world market, is weak because marketing abroad is difficult as compared with selling on the fully protected domestic market, where buyers have few choices and little bargaining power. Implementation of the foreign trade plan may be controlled through the licensing of foreign trade transactions, the controlled allocation of foreign exchange, or both.

(b) Travel and private remittances are controlled directly by licensing and indirectly by manipulating the de facto exchange rate.

(c) Capital flows are strictly controlled.

10. MONEY AND CREDIT

(a) In the enterprise sector, money and credit are "passive" in the sense that the flow of funds to enterprises is adjusted by taxes, subsidies, and credits to implement the allocation of resources and goods previously made essentially in physical terms. Credit is used mainly to provide enterprises and large firms with the financial resources necessary to carry planned inventories, to finance the collection gap, and to have an additional level of control over them. The main objective of monetary policy is to provide sufficient liquidity to enterprises and the state budget to enable them to fulfill the plan. A single bank performs both the central and the commercial banking functions.

(b) In the private sector, the purchases of consumers and the activities of small producers and traders will be influenced significantly by their access to money.

11. STATE BUDGET

The main function of the state budget is to collect that portion of the income of enterprises, collectives, cooperatives, and the population which the planners decide to centralize, and to redistribute this income to finance public consumption and much of new investments. Turnover taxes—the difference between the retail prices of consumer goods and services and their cost of production, is a major revenue item.

B. Economic Policy

It is useful to make a distinction between economic system and economic policy; the former is the subject of this essay, the latter is examined in the following chapter. Economic policy is a set of linked decisions by policymakers (in a CPE, top party and government officials) about the relative importance of certain economic objectives and ways to achieve them. If policy objectives can be quantified, they become targets, e.g., rates of growth of consumption, investment, and the military; the distribution of investment by sectors and regions; unemployment and inflation; and the commodity and geographic compositions of foreign trade. Furthermore, decision on tax rates; length of the workweek; the retirement age; how much of consumption is provided in the form of wage-type earnings, transfer payments, and as free or subsidized public goods; and the distribution of income are policy decisions also.

Economic system and policies, together with the domestic and external "environment," jointly determine economic outcomes, that is, the economy's performance. The most important reason for the distinction between economic system and economic policies is that the latter can be changed more easily and quickly than the former. Another is that most policy changes have less ideological significance (a reason they are easier to make) than systemic changes.

Although economic system is differentiated conceptually from economic policies, the two are often linked in practice. Traditional CPEs tend to be identified with certain policies: ambitious growth rates, devoting a relatively large share of investment to heavy industries, a willingness to establish and expand branches and enterprises irrespective of their ability to compete in world markets, and preference to import only goods needed to build and operate the capacity created. High priority is typically given also to consumer price stability, full employment, a relatively equal distribution of income, and in many areas of consumption preferring rationing by the center (e.g., housing, education, healthcare, urban transportation) over monetary purchase decisions by individual consumers.

An important link between economic policy and system is that one policy decision may be to change the economic system because that may be regarded the best way to accomplish certain policy objectives.

III. REFORMING THE TRADITIONAL CPE AND HUNGARY'S REFORM CONCEPT

A. Pressures to Reform

The traditional CPE model was introduced in the U.S.S.R. in the 1930s to promote rapid industrialization and to build up the military power of a large and relatively underdeveloped economy with excellent resource endowment and large supplies of underemployed labor.

Hungary, like most of the other East European countries, is a small economy, lacking to a great extent the resources and the potential internal market for pursuing large scale, across the board, import substitution industrialization, It is thus much more dependent on foreign trade than the U.S.S.R. Its exports must increasingly consist of processed agricultural products and industrial manufactures, which it must trade on the world market because many needed imports—energy, raw materials, intermediate goods, modern technology, and high-quality consumer goods—are not available in sufficient quantities or quality from CMEA suppliers. After a period of extensive growth in the 1950s during which resources, especially investments were mobilized and stretched to the limit and thereby substantial increases in the quantity of output were achieved, further growth became more and more dependent on reducing the wasteful use of inputs and improving the quality of products. Inputs are wasted because each element in the planning pyramid is forced to secure large and secret reserves to insure plan fulfillment. Without a market mechanism, there is no objective measure of a firm's performance, hence no disinvestment, hence insufficient pressure to reduce cost and introduce technological and product innovation. The problem is made worse, paradoxically, by the natural ambitions of all production units to expand output, since they do not face market or financial barriers; "the budget limit is soft," to use Hungarian economist János Kornai's felicitous phrase. These shortcomings generate pressures to reform the traditional CPE mechanism, stronger pressures in the smaller countries that depend heavily on trade with the industrial West and have few natural resources to generate the hard-currency earnings.

Concrete pressures for reforms emanate from three interrelated sources: decline in the growth rates, unsustainable increases in convertible currency deficits, and consumer demand for improved living standards. The regimes want to respond to consumer pressures not only for political reasons but because better material incentives are a necessary (though not sufficient) condition for improved productivity, which in turn is essential for alleviating the other two pressures.

B. Reform Options

Economic reforms tend to be identified with "decentralization." There are two main alternative decentralization models: administrative, i.e., the partial evolution of authority over selected decisions from higher to lower tiers in the pyramid, whose aim is to improve the functioning of a traditional CPE system; and economic, i.e., monetizing the economy, relying on "economic regulators", and opening up the economy to some degree of influence to domestic and foreign market forces. There is also a third model, which abandons central planning and decentralizes economic (and political) decisions to their lowest possible levels, both regionally and within the firm, which exists only in Yugoslavia, and is not discussed in this essay.

The hallmark of administrative decentralization is that the authorities retain the system of plan directives. They form mammoth production units, often larger than optimal size from the point of view of technology and managerial efficiency, because having to deal with a smaller number of production units makes plan decomposition simpler and facilitates the devolution of the detailed planning responsibilities to these units. Hierarchical relations between planners and producers remain important even though some horizontal links between producers may be allowed. Plan directives expressed in value terms assume greater importance and such traditional indicators of plan fulfillment as the gross value of production may be supplemented or supplanted by gross sales less returns or net value added; even profitability may become one of several indicators by which the performance of a firm or farm is judged.

The hallmark of economic decentralization is that the system of plan directives to producers is discarded, replaced by "economic regulators"—e.g., prices, taxes and exchange rates. Industrial organization, that is, the size of enterprises and farms, is decided on the basis of what is optimum from the point of view of technological and managerial efficiency. Producers are linked horizontally through the market and are given considerable authority to make decisions and to enjoy or suffer the consequences. Profitability becomes the most important, though not necessarily the only, indicator of performance. The dual purpose of the economic regulators—their values partly determined by the market and partly set administratively by the planners—is to transmit both market signals and planners' preferences to producers and consumers. Even after compulsory plan directives are abolished, it takes a considerable time before producers can be allowed to make, or will themselves make, decisions largely on the basis of economic regulators rather than on the basis of paternalistic "consultations" with the planners; the reasons will be indicated. But once a certain stage in the reform process is reached, a regulated market mechanism will have been created, although central planning will be maintained also. In this system of regulated market, central planning means setting broad targets of economic policy and elaborating the means to attain them, namely central responsibility for investment in infrastructure and some production capacity, making and fulfilling certain foreign trade commitments, and manipulating the economic regulators.

Thus, under this concept, the issue is not "plan versus the market" but the proper scope and instruments of central planning. It would also be improper to label such a system "capitalist," principally because the means of production are predominantly non-privately owned but also because the planners have a considerably greater influence over prices, enterprise income generation and allocation, trade and capital flows, the exchange rate, and income distribution than in the mixed market economies of the West, though not necessarily more than in some of the developing countries. To be sure, if and when the scope of central planning is further reduced, the regulators become increasingly market determined, and some ways are found for the population to own (but not individually control) the means of production, then, but only then, would such a system converge with the economic system found in the industrial Western countries.

As administrative or economic decentralization type reforms are introduced, several strategically important choices must be made. One is whether a proposed reform measure or program should be first tested by applying it experimentally to a limited number of producers or sectors, or introduced throughout the economy. Another is whether the reform program—a set of interrelated reform steps—should be introduced in a phased or simultaneous manner. To be sure, this is not a choice between introducing all reform elements vs no change at all, but whether at any point in time a single, a small set, or a large set of measures should be implemented. Generally, the more comprehensive the measures, the greater is their internal consistency, but also the strength of the forces that will oppose them. Another difficult decision is whether the reform rules should be modified frequently to alleviate unforeseen problems or be maintained for an extended period so as not to weaken the players' confidence in the authorities' reform commitment.

Although the administrative and the economic approaches to decentralization are fundamentally different, certain initial reform steps may be consistent with either reform concept. These include a reduction in the number of compulsory plan targets, fuller definitions of what constitutes costs (e.g., interest and rent charges), increasing the importance of such monetary aggregates as net sales and profits, greater reliance on material incentives, and enlarging the legal scope of the private sector, which may become quite important but not dominant under either reform concept. Moreover, it is possible to introduce, experimentally or permanently, reforms of one type in one sector and of another type, or no reform at all, in the other sectors. And to complicate matters even further, the authorities may change course as the ideas of their economists or the correlation of political forces shift. Thus, it is not surprising that there is a great deal of confusion and imprecise use of terminology when economic reforms are discussed, East or West.

C. Hungary's Reform Concept and Experience: An Overview

Today, Hungary's decisionmakers are committed to economic decentralization type reforms because the country's own past experience and the logic of their economists have convinced them that the traditional CPE system does not yield satisfactory results and that the modest improvements that administrative decentralization can bring are insufficient. Only since the early 1980s has there been a reasonable leadership concensus on this (many reform economists had reached this conclusion in the 1960s already), though obviously there are disagreements on details and implementation strategies. But the road traveled to reach a broad consensus has been a winding one.

A major milestone was the Revolution of 1956 which thoroughly discredited the Stalinist economic and political system. Immediately after the Revolution the party appointed a committee of experts who in 1957 recommended the introduction of a comprehensive, economic decentralization type reform and provided a draft blueprint. But the rapid consolidation of the economic and political situation took the political steam out of the reforms, except in agriculture. Although agriculture was recollectivized during 1959–62, itself an act of conformity with the traditional system, the way collectivization was carried out, but especially the growing role that market mechanisms were gradually allowed to play, amounted to a significant reform in the system. During the mid-1960s, the example of the measures that were introduced in the Soviet Union (the Lieberman reforms) and elsewhere in Eastern Europe, and Hungary's own excellent results in agriculture, problems in other sectors, and the fortuitous appointment of Rezsö Nyers to key party posts, provided sufficient political momentum for the introduction of the NEM in January 1968 and its retention despite the events in Czechoslovakia in August of that year.

Although the NEM is often labeled a comprehensive reform, the unwillingness concurrently to change the institutional framework of a traditional CPE extant imposed severe constraints on the kinds of reforms that could be introduced (more on this later) and made it relatively easy during 1973–78 to halt, and in some areas to reverse (not formally but in practice) the NEM reforms. Only around 1978, when the shortcomings of traditional CPE-type economic policies and the many remaining legacies of that system became readily apparent once again was a political consensus reached that economic reforms must continue.

The 1979–84 period was one of repairing the damage to the NEM and creating some new foundations for a significant advance during the second half of the 1980s. In 1984 a series of decisions were taken at the highest levels of the party and government to introduce a new set of reforms during 1985–87. If implemented as planned, their significance may rival if not exceed the set of measures implemented in 1968 as the NEM.

One of the most striking aspects of Hungary's reform experience is how technically complicated and politically difficult it is to transform a traditional CPE system into an efficiently operating mechanism. Even under the most favorable political circumstances (i.e., more favorable than in Hungary during 1957–84), it will take not years but decades for the transformation to be completed. Much of the rest of this essay chronicles and evaluates the main stages of the transformation.

Hungary has come a long way since 1956. Today it is approximately at a halfway point between a traditional, Soviet-type CPE and an efficiently operating regulated market system—one that is realistically attainable because it would not require unacceptable changes in Hungary's domestic political and CMEA arrangements. Our earlier description of the basic features of the tradtional CPE system provides a point of reference on how far Hungary's reform has come. In the next section I will sketch the basic features of the regulated market mechanism Hungary is moving toward as a point of reference on how far the reforms still have to go.

D. How Would an Efficient "Regulated Market Mechanism" Operate?

A regulated market mechanism whose outlines are emerging from the writings of Hungary's reform advocates could still be regarded as a centrally planned system. The single-party political system would be preserved, but with the plurality of economic and political interests much better represented and their conflicts much more openly resolved then in a traditional CPE. Central planning over the main directions of the economy would be maintained but its scope would be restricted to macroeconomic policy issues, direct allocation of some investments, public utility type arrangements to maintain infrastructure and defense capability, and the fulfillment of trade obligations with CMEA partners.

The predominantly non-private direct ownership of the means of production would be maintained but with considerably greater scope for private entrepreneurship and property rights than in a traditional CPE.

For efficient resource allocation there would be competitively functioning markets for basic, intermediate, and finished products as well as for capital and labor. Setting up a market for capital would mean, however, that the problem of organizing it without direct private ownership of the means of production would have to be solved. The state could influence resource allocation by manipulating those economic regulators that are basically market determined (prices, wages, interest rates, and exchange rates) and by altering those that it sets (taxes, tariffs, and subsidies).

Industrial organization would be flexible. Enterprises and cooperatives could be established by state organs, other enterprises and cooperatives, commercial banks, foreign and Hungarian partners as joint ventures, and private persons (small scale only). Size of production unit would be adapted to the requirements of technical and managerial efficiency. Inter-enterprise relations would be horizontal.

Enterprise management's objective function would be the maximization of the unit's wealth. Long-term profitability, the synthetic indicator simultaneously encompassing all aspects of enterprise activity, would measure a firm's efficiency and would be the basis for its survival and expansion.

Personal compensation would be set by the competitive labor market. Income from entrepreneurship and rent would be allowed; total income would be subject to a progressive income tax. State policies regarding public consumption and income distribution would be implemented through appropriate tax and transfer payment systems.

The price system would yield the correct signals for most resource allocation decisions. Prices would be determined competitively by domestic demand and supply, with imports allowed relatively freely to provide further competition. Supply and demand, operating through flexible domestic prices which in turn would be related to world market prices, would help guide decisions on inputs and outputs.

The currency would be externally convertible for current transactions against all convertible currencies, and its value maintained under one or another type of exchange rate regime.

External trade transactions with market economies would not be controlled except through commercial policy instruments that conform to the GATT code. State control over capital transactions would be maintained. A significant share of trade with countries that remain traditional CPEs would continue. Export and import obligations under CMEA bilateral or multilateral agreements would be negotiated by the state with the participation of enterprises and the state would rely on market-type incentives to induce firms to fulfill them.

There would be no significant restrictions imposed by the state on the use of enterprise or household money and credit according to purpose. The institutional separation of central and commercial banking functions would have been carried out, with the central bank in charge of monetary policy and commercial banks operating as profit-making institutions.

The state budget would be an instrument of fiscal policy; the automatic financing of budget deficits by the central bank would be discontinued.

The next section summarizes the most important milestones on Hungary's road to economic reform.

IV. Evolution of the Economic Mechanism, 1953–1984

A. 1953–56: Identifying Shortcomings of the Traditional CPE Model

Between Stalin's death and subsequent political thaw and the Hungarian Revolution of 1956 numerous works appeared in Hungary, and in several other East European countries, notably Poland, critical of both the Soviet-type CPE system and development model and the excesses with which central planning and forced industrialization were pursued. Numerous proposals were made to reduce overcentralization, to pay greater attention to costs, prices and profitability, and to help re-establish a better balance between supply and demand. There were no comprehensive reform proposals, only ideas about how one or another shortcoming of central planning may be improved. These ideas served as yeast to post-1956 reform proposals. The main contributors were György Péter [1954], Director of the Central Statistical Office, who pointed out the damage caused by giving too many plan directives to enterprise managers; Liska and Máriás [1954] who criticized Hungary's policy of attempted autarky and recommended that the country participate in the international division of labor on the basis of its comparative advantage; and János Kornai, whose 1953 article in the country's most influential daily (*Szabad Nép*) and his 1956 doctoral dissertation [1957] analyzed both theoretically and empirically the disastrous consequences of overcentralization in economic decisionmaking. Also important was an unpublished but widely circulated study by Liska, *Oeconostat*, outlining the principles of a self-regulating economy. These works were influential in shaping the thinking of economists and politicians and thus can be considered the intellectual precursors of the reform proposals made after the Revolution of 1956.

B. 1957: Reform Proposals Developed but Not Implemented

The Revolution of 1956 was a tremendous shock to the system's directors and triggered a serious consideration of far-reaching economic reforms. An expert committee was appointed by the party late in 1956, dominated by reform-oriented economists. It put forth during the first half of 1957 a radical reform proposal that contained most of the reform measures introduced in 1968 [Berend 1983a]. One major difference was that according to the 1957 blueprint all investment would still be financed by the state budget. The comprehensive reform plan was not implemented. Some attribute this to the faster-than-expected consolidation of the Kádár regime's economic and political power, reducing the urgency of the reform to gain domestic political support, and to opposition by the USSR; others emphasize that recollectivizing agriculture was a sufficiently big task for the authorities to carry out.

C. 1957–62: Pioneering Partial Reforms in Agriculture

During the early 1950s the majority of peasants were forced to join collective farms in a brutal compaign drive modeled on the collectivization of Soviet agriculture during the early 1930s. State purchase prices of compulsory deliveries did not as a rule cover even the cost of production. During and immediately after the Revolution of 1956, two-thirds of collective farm members left the collectives and during the next few years were doing better as small private farmers. In 1957 the government made an important decision to abolish compulsory production and delivery obligations, replacing them with voluntary contracts at more favorable prices.[2] Abolishing compulsory agricultural deliveries was analogous to abolishing in 1968 complusory plan targets for industrial firms.

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[2] This reform measure was introduced in the same year also by Romania, the Soviet Union in 1958, Bulgaria in 1959, Czechoslovakia in 1960, the GDR in 1964 and Poland in 1972 (Wadekin].

In 1958 the decision was made to recollectivize and the task was accomplished during 1959–62. Its method, however, was different than that of any previous collectivization drive in a CPE. Instead of relying only on force, economic coercion, pitting poor against the middle- and well-to-do farmer, and expropriating the property of the latter group like in the earlier "anti-kulak" campaigns, the campaign relied also on persuasion and incentives. Pesants were offered choice to decide on the type of cooperative or collective they would join and in making decisions as members. Those who joined received lifetime annuities for the land and token payment for the other assets contributed and were allowed to retain significant household plots and stock of animals. Well-to-do peasants could be chosen for leadership posts after a few years and many were elected. The significance of this was that middle income peasants were accustomed to operating in a market-oriented environment, so that they could exercise entrepreneurial initiatives when that became possible, responding to price, tax, subsidy, and personal-income-incentive signals. A further distinctive aspect was the government's commitment to make the farms economically viable production units by providing inputs and substantial investment resources in the form of state grants and repayable loans, about two-thirds of which were later canceled. Hungary became the only CPE where crop output increased during the collectivization drive and the livestock numbers dipped only a few percentage points [Berend 1983a]. Agricultural prices were raised (with prices paid for deliveries by collective farms set higher as an incentive to join) and have continued to increase. Central Committee Secretary and Politburo member Lajos Fehér, who opposed strongly collectivization before the decision was taken, was a key figure promoting and implementing this "reform collectivization model."

During the more than two decades since recollectivization, agriculture has continued to push ahead with reforms, to be sure, in a stop-and-go fashion. New incentive mechanisms were introduced; private, collective, and state farm production and marketing were integrated; and (after the NEM was introduced) entrepreneurial ventures in industry, construction, and service allowed. The sum total of these and other reforms in agriculture is significant for understanding Hungary's overall reform process. The reform initiatives often came from below, from the managers or directors of large farms. The authorities sometimes enthusiastically endorsed, sometimes tolerated, and at other times temporarily reversed the reform initiatives, depending on the political climate. Each time when significant restrictions were placed on agricultural producers, a stagnation or decline in output was triggered, forcing the lifting of the restrictions. But on balance, agriculture has remained in the vanguard of Hungary's reforms movement. The sector's success in terms of increased yields and output has facilitated the introduction of reforms, from above, in other sectors.

D. 1958–65: Improving the System and the Industrial Merger Movement

During this period there was no permanent backsliding of the agricultural reforms implemented but also no great forward leaps toward comprehensive reforms in the economy's other sectors. But certain steps were taken that may be considered the precursors of later reform measures. The number of centrally prescribed indicators was reduced, and profit sharing between enterprises and workers was introduced. In 1959 depreciation rates were increased to more realistic levels and a social-security-type wage tax was introduced. The prices of imported energy, raw materials and some other products were set at more realistic levels. The 1959 price revision led to considerable price increases net of turnover taxes because much of the expensive subsidies to such basic industries as mining and metallurgy was discontinued and because imports were more realistically valued. In 1964 a 5% charge on the value of fixed and working assets was introduced but handled not as a required minimum rate of return on assets but as a component of cost. Enterprises, however, continued to have no great difficulty recovering costs. Thus, while the price measures may have improved the decisions of the planners, they did not advance greatly the efficiency of enterprise operations.

In some areas of light industry, such as fashion goods, compulsory plan breakdowns were discontinued, letting the manufacturer and the distributor bargain; only if they could not agree would the ministry intervene. Also, whereas before wages were regulated strictly, after 1957 wages could be bargained within a certain range. But at the same time many industrial enterprises were merged and large trusts established during the late 1950s and early 1960s to improve the functioning of the traditional CPE system. These large units were given some additional power to make decisions, thus in effect implementing limited administrative decentralization, but the planning mechanism was not changed in any fundamental way. At the same time, the organizational measures taken left an exceedingly high degree of industrial concentration that impeded subsequent attempts to establish horizontal, market-oriented relations between firms.

E. 1965–72: Designing and Implementing the New Economic Mechanism

1. WAS THE NEM A COMPREHENSIVE REFORM?

The main building blocs of an economic system are its method of planning, its regulatory mechanism (instruments of planning), and the structure of its economic institutions. To move toward economic decentralization, the NEM changed the methods of planning and introduced a new regulatory mechanism. However, it did not touch the old structure of economic institutions. This is the reason why the NEM was not a unified, internally consistent reform model. But since many aspects of the system were changed at once, the NEM is often referred to as a comprehensive reform model, setting it apart from reforms that touch only one or another component of one of the building blocs of the system.

2. PLANNING

In the NEM concept, central planning was not abandoned, only its scope reduced and its instruments changed. Whereas in a traditional CPE the center plans both macro- and micro-decisions, in the NEM planning focuses mainly on macro issues. Direct planning in the micro sphere was to be limited to investments in infrastructure and large investments in certain high-priority productive sectors; the administrative regulation of defense industries; the fulfillment of CMEA trade obligations; and, temporarily, ensuring that domestic supply responsibilities would be met for key products, such as basic consumer items. To fulfill macro-economic objectives, the center would rely mainly on a market mechanism which it would regulate by setting or influencing its parameters, e.g., prices, rules of setting wages, interest rates, bank credits, exchange rates, taxes, subsidies, and tariffs. Thus, central planning under the NEM meant setting the broad targets of economic policy and elaborating the means to attain them. One feature of planning is the "open" character of the plans. Recognizing that unforeseen domestic and especially external events will require flexible adaptation, some targets are given as ranges and may be revised during implementation.

In a traditional CPE the plan is implemented through compulsory plan directives to producers. The most important feature of the NEM was abolishing compulsory plan directives, replacing them with economic regulators. Enterprises were to formulate their own plans in the context of the national economic plan and the regulators they face, discuss them with their superiors, but fulfillment was not compulsory. Legally, enterprises could not be ordered to change their plans; Hungarian sources disagree on whether during 1968–72 the same results were often achieved by the center through "persuasion," given the continued dependence of firms on the center, as will be elaborated.

3. THE REGULATORY MECHANISM: A BRIEF DESCRIPTION

Since numerous works describe in considerable detail the new instruments of the NEM, its summary here can be brief.[3] From the point of view of the center, implementation of the plan was primarily through the manipulation of the "economic regulators": prices, exchange rates, taxes, subsidies, rules of wage setting, interest rates, credits, and tariffs. The uniform application of the regulators was to be achieved gradually, over a period of five to ten years. During the transition period there was to be branch- and enterprise-specific determination of the regulators, which meant that their application often remained subject to bargaining. Nevertheless, enterprises were told to become profit-oriented and significant differentiation between firms in terms of profitability and adaptability to the new economic system began.

The new price system was a centerpiece of the NEM. Prices were revised to reflect production costs more accurately. Most exporters received the actual export price converted to forints at new and more realistic exchange rates.[4] The domestic prices of *some* imports were set on the basis of the actual cost of the imports at a point in time, but then remained unchanged for a long time. The scope and extent of central price determination was relaxed a little immediately; the authorities planned gradually to allow more and more prices to be set by supply and demand so that they would also fulfill a market-clearing function. Industrial producer (wholesale) prices were fixed on a branch-wide cost-plus basis. Enterprises that could not cover costs were subsidized temporarily. Farmgate (agricultural procurement) prices continued to be set centrally but with increased attention paid to providing production incentives and raising personal income levels relative to those in other sectors. Because industrial and agricultural prices had been increasing for about ten years before the NEM was introduced and rose significantly further in 1968 as a consequence of the price reforms, while consumer prices had remained largely unchanged, an unusual price relationship arose: the consumer price level became about the same as the producer price level. This problem was to be rectified gradually: consumer prices were to be revised so that during the next ten- to fifteen-year period relative prices would correspond to relative production costs (except on items subsidized or taxed as a matter of state preference), and the consumer price level would move significantly above the producer price level. Achieving these objectives would take a long time because there were large initial differences between cost and consumer-price structures and retail prices could be increased only gradually because the rate of inflation had to be limited for reasons of social policy [Csikós-Nagy 1980].

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[3] For example, [Hewett], [Balassa] and [Hare, Radice and Swain].

[4] Until 1976 they were called foreign trade multipliers. The plan was eventually to unify the commercial and tourist exchange rates and to introduce the external convertibility of the forint for current account transactions [Marer 1981].

Current production decisions by enterprise management were made more flexible. Management was told to maximize profits, but controls remained in many areas. Firms were instructed to allocate profits to a sharing fund to finance large taxes on wage *increases,* a development fund to finance some investments, and a reserve fund for contingencies, each fund taxed at varying rates. Enterprises could compete for some bank credit for investment purposes. Thus, while money and credit became more "active" in the enterprise sector, funds at the disposal of producers could be spent only for designated purposes. Effectively, therefore, the reform devolved to enterprise managers many decisions regarding inputs and outputs and some decisions concerning personal compensation and investment, but strategic business decisions remained subject to strict central guidelines and intervention.

Nonagricultural wages were regulated by centrally fixed compensation ranges by categories of skill, responsibility, and effort (the range in each category being wider than in traditional CPEs) but mainly by rules controlling the annual increases in a firm's average wage or total wage bill. Regulating average wages was to be an antidote against layoffs that were feared as a consequence of the increased efficiency of production, since limiting average wage increases was to discourage enterprises from laying off the less skilled. In fact, it inflated artificially the demand for less skilled labor.

Productive investments outside agriculture that could be initiated by enterprises (approximately 50% of the total) were regulated by branch-specific rules on creating and replenishing the development funds, the continued central allocation of some key inputs, the licensing of imports, and the credit and investment-grant policies of the central authorities. The granting of credits under central guidelines specifying objectives became an increasingly important instrument for determining the level and direction of enterprise investments; the interest charged played only a minor role. Thus, although enterprise proposals had some bearing on the granting of credits for investment projects, the proposal's themselves were often drafted to fit the monopoly credit-granting institution's guidelines.

4. THE REGULATORY MECHANISM: AN INTERPRETATION

We all know that what the Hungarians call "economic regulators" are set arbitrarily in a traditional CPE where they play little role in resource allocation. The NEM blueprint implies that Hungary's prices, wages, bank credits, exchange rates, taxes, etc. more or less will operate and serve functions similar to those they have in a market economy. Then observers learn that practice is quite different, in that prices, exchange rates, etc. are not really market determined. Many observers therefore find Hungary's mechanism confusing.

There are two basic reasons why Hungarian planners cannot allow the regulators to be fully or largely market determined at once.

The most important is that in 1968 Hungary did not (and today still does not) have the kind of industrial organization and competitive conditions that are essential for an efficiently operating market mechanism. This is largely because the institutional structure of traditional CPE was not changed (more on this below). Thus, prices, wages, etc. cannot be allowed to be freely market determined if many producers are monopolistic sellers or monopolistic buyers on the domestic market and if the CC balance of payments is too fragile to allow significant import competition.

A second reason for administratively setting the regulators and controlling their impact is that two decades of skewed economic development and arbitrary price, wage, tax, and subsidy policies have created all kinds of imbalances in the economy—large excess capacity in some sectors and insufficient or outdated capacity in others; many shortages and some surpluses in services and products; and arbitrary relationships between product and factor prices. Therefore—even if competitive conditions were present—if the regulators would have been allowed to be market determined at once, enormous economic dislocations would have resulted, including inflation and unemployment, that are not acceptable for reasons of social policy. Economic regulators are thus administered and their impact controlled to dampen economic disruption. (That the controls often remained so pervasive that little or no desirable change was brought about is another issue).

One should of course note also that planners' preferences often differ from outcomes that would be generated even by efficiently operating market forces, a reason for central planning in the first place.

Conceptually, there are similarities between the three enumerated reasons that prompt the planners' intervention into the market in Hungary and the reasons why governments in mixed market economies intervene also. The main difference is that in market economies the first and second set of reasons typically are much less important and thus trigger much less intervention, than in Hungary in 1968, or even today.

Hungarian reformers strive to create a market mechanism where the main regulators can be allowed to be largely market determined and economic agents are fully responsive to them. But even under a very favorable political scenario, the many legacies of the traditional CPE system and policies alone imply that it will take many years to get there. Moving in that direction entails not one but many series of new reform measures. (Thus, when a CPE announces a new set of reform measures, that may signal that previous reforms have failed, that previously announced reforms were never implemented and will be tried again, or that a new stage has been reached in the evolution of the economic system.)

5. THE INSTITUTIONAL STRUCTURE

Whether and how the economic regulators can function is tied especially closely with the country's economic institutions and their structure, i.e., its industrial organization, the structure of its central economic bureaucracy, the banking system, and the organization of foreign trade.

Industrial organization must facilitate maximum feasible competition between domestic producers and consumers. The many branch (and some functional) ministries that exist with large staffs in a traditional CPE have as their raison d'etre the planning and control of the economy's micro sphere; it they survive intact the abolition of directive planning, force of habit alone means that they will try to continue to do what they know to do and thus hinder the operation of a market mechanism. The monobank, which in a traditional CPE serves both as central bank and the single commercial bank to facilitate the implementation of the central plan, needs to be partitioned into an independent central bank and a profit-oriented network of competing commercial banks as a necessary (but not sufficient) condition of creating a market mechanism. Economic decentralization means the monetization of the economy; all of the "regulators" are financial instruments. First, their effective functioning requires macroeconomic balance, for which monetary policy is the key; an independent central bank can best provide it. Second, an efficiently operating market mechanism needs a competitive commercial banking system to serve as a financial intermediary and hard-nosed provider of capital under equity or loan arrangements. Finally, the market needs a foreign trade system that lubricates rather than hinders export and import competition.

In 1968 the reform advocates wanted also to reform the institutional mechanism but they were politically not strong enough to see it being implemented. Two significant steps were taken but they were insufficiently comprehensive. One was that large agricultural producers were allowed to engage in nonagricultural pursuits also, which began to improve the supply situation in industry, construction, and trade and here and there started to create new competitors for the large units. The other reform was the granting of direct foreign trading rights to some producers and allowing partnership-type arrangements between certain FTEs and producers. But otherwise the industrial structure, one of the most highly concentrated in the world, was not touched and neither were the branch ministries and the banking system.

6. IMPLEMENTATION THROUGH 1972

At the end of 1964 the party initiated a process which led to an interrelated set of reform measures, known as the NEM. Central Committee Secretary in charge of economic policy, Rezsö Nyers, played a key role. Committees of experts were appointed in 1965 to prepare a reform blueprint. During 1964–67 there was a great deal of enlightened and largely rhetoric-free debate about the need for comprehensive reforms and details of the prospective new mechanism. The May 7, 1966 Resolution of the Party's Central Committee was the key decision date and reform document [Balassa, p. 5].

The NEM was introduced on January 1, 1968 and further reform steps were implemented during the next four years, as scheduled. Coinciding with favorable developments in Hungary's external economic environment, the 1968–72 period brought good results in terms of growth, the balance of payments, and improved living standards—certainly attributable in part to the favorable impact of the NEM. Enterprise managers began to think in economic terms and to orient toward domestic and foreign consumers with whom they now often had direct links. Their greater flexibility of decisionmaking and the enhanced importance of profits helped to improve the quality and assortment of products.

7. UNRESOLVED PROBLEMS

The specific problems enumerated in this section, at greater length than the achievements summarized in the previous paragraph, is intended to suggest the large reform agenda that remained after the introduction of the NEM, not to provide a balanced assessment of the reform.

Insufficient Competition.—The reforms did not do much to encourage import competition which for a small country is essential, nor was there much domestic competition. The country's highly concentrated industrial structure remained untouched. Although in the 1950s already industrial concentration was much greater than justified by economic or technological considerations, during the first half of the 1960s the number of state industrial enterprises declined further, from 1,368 to 840. The main purpose of increasing industrial concentration was to make it easier for the center to retain control after giving up directive planning. A large monopoly producer was to be in a better position to perceive correctly the national interest than a larger number of competing smaller producers would be. From the center's perspective, it was also easier to give up directive planning if the large monopolistic firms would take over production planning; in fact, such firms were given "supply responsibilities" to produce enough to meet essential demand [Schweitzer, pp. 39-47]. The NEM was thus introduced in a country with one of the world's most highly concentrated industrial structures, which inhibited competition, hampered progress toward eliminating the vertical relations of dependence between enterprises and the center, and was responsible, together with the other institutional legacies, for the shortcomings of the price and wage system.

Shortcomings in the Price System.—The prevailing view was that prices provide "correct" signals if they reflect accurately productions costs. The important functions of demand and competition to help set prices (and therefore also shape costs) were under-emphasized, in part because there was insufficient competition to be able to let prices find their own level.

The System of Wage Determination Remained Unsatisfactory.—The continued policy of maintaining full employment and retail price stability imposed important further constraints on the operation of a market mechanism. A wage incentive system based on enterprise profits was introduced, with only limited freedom for a manager to offer differential pay since the average wage level and the enterprises' annual percent wage increment were controlled. Moreover, individual compensation linked to enterprise profits motivates correctly only those whose work has a transparently direct impact on profits, not the case for a great majority of workers. The wage system impeded labor mobility and was one constraint on profit maximization. At the same time, strict regulation of the average wage and their relatively low level (reflecting that only about 65% of real income was determined by the wage, the rest by free or highly subsidized consumer goods and services and large transfer payments) caused an artificial swelling of the workforce in factories, a paradoxical outcome since the labor shortage perceived on the national level was one of the reasons for introducing the NEM in the first place. Moreover, the (political) principle of local job security was not challenged.

The Problem of Investment Efficiency was not Solved.—Although nominally enterprises could initiate about half of total investment, in the absence of financial intermediation they could invest only in their own activities so that the opportunity cost of investing was not considered. Dependence on the center for investment funds and the continued absence of serious consequences of poor project decisions meant that there was no mechanism to ensure that enterprise-initiated or state-sponsored projects would be efficient. There was no mechanism to check the "investment hunger" of enterprises, budgetary organizations, and central and local government units and no clear responsibility for poor project design or implementation.

Weak Profit Motive.—One consequence of the enumerated problems was a weak profit motive, especially for the large industrial enterprises, which depended on the center in so many ways that maintaining the benevolence of the authorities was as if not more important than profits. Managers and their deputies continued to be appointed, promoted, and their bonuses decided by the branch ministeries. The hierarchical dependence of many enterprises on the center continued through the mechanism of the annual "plan coordination" discussions. During these talks the voluntary accceptance of certain state priorities by a firm was frequently linked to decisions about the resources that an enterprise would receive. Moreover, the price, wage, tax, subsidy, credit, etc. regulators could also be "adjusted." Although a firm's request for special treatment was often justified by the many distortions which could make profits an unreliable guide to performance, the net result was a tendency to reduce differentiation between efficient and inefficient enterprises, the latter in effect subsidizing the former. No large firm had to fear going bankrupt, although the relative positions of many visa-vis the smaller firms were weakened.

Unsatisfactory Integration With the CMEA Foreign Trade Mechanism.—Approximately half of Hungary's foreign trade flows continued to be with CMEA partners, all of whom essentially retained the traditional CPE mechanism. The basic problem was—and remains—the conflict between having to fulfill the state's largely fixed delivery and purchase obligations from CMEA while encouraging enterprises to become profit oriented. This problem is much more intractable in Hungary's exports, comprised largely of manufacturers, than in imports, where the share of energy, raw materials, and semimanufactures is most important. The compromise solution was—and remains—to insure via subsidies and taxes that dealings on the CMEA markets are approximately as profitable for a firm than its dealings on the domestic and Western markets. But this runs counter to the basic principle of the NEM: to allow increased differentiation in entreprise profitability and then let profitability be a guide to production decisions; it also hinders the expansion of CC exports.

F. 1973–78: Increased Administrative Interventions Halt the Reform Process

Beginning in late 1972, domestic and international political and economic developments led to a retrenchment on implementing the NEM, although the NEM principles were formally not abandoned. The counterattack was led by the state and party bureaucracy, supported by large industrial enterprises reacting to the deterioration of their relative economic positions and to the decline of the prestige of their managers and workers. The profitability of many large firms declined, exposing the fundamental weaknesses of their investment programs, product quality and assortment, and entrepreneurship. At the same time, many small- and medium-sized firms and agricultural producers in general were much better able to take advantage of the opportunities opened up by the NEM. They began to undertake and quickly succeed in manufacturing parts, components, and finished products in short supply and started to compete successfully also in the construction and service sectors. One consequence was that the more challenging employment and better income opportunities they could offer attracted a significant number of persons from the large firms whose managers resented the newly emerging competition and whose workers complained about the income disparities that were growing. The increasingly politicized counterattack (the directors of several large firms were members of the Central Committee) began in 1971 and succeeded by the end of 1972 when 50 of the largest firms were placed in a special category, their economic performance tracked individually, and supported when necessary through special concessions and subsidies. At the same time, the entrepreneurial activities of the smaller producers and those in agriculture were restricted by a series of new regulations. During the next few years many successful small- and medium-sized firms, in the machinery sector especially, were amalgamated with the 50 large firms, reversing the decentralization trends of 1968–72, causing the remaining independent smaller establishments to become fearful and therefore entrepreneurially much more cautious ([Szalai] and [Ritter]). The less liberal political climate was confirmed by Nyers and Fehér losing their Politburo positions in 1974.

Further weakening the reform momentum was the deterioration in the terms of trade in the wake of the world market price explosion of energy and subsequent Western recession. These difficulties played into the hands of those who favored a more centralized model of economic decisionmaking. The structure of domestic producer prices became increasingly isolated from world market prices owing to increased intervention by the authorities on a industry-by-industry and firm-by-firm basis, trying to protect the economy from the external economic shocks. The scope of quantitative regulations (purchase quotas and central allocations) increased, taxes were levied on "unearned" profits on a firm-by-firm basis while more and more enterprises bargained for subsidies. Since producers had few inducements to become cost conscious, the energy- and material-intensive pattern of production was not altered. The rise in domestic producer prices was not transmitted fully to consumer prices to hold inflation in check so that customers had little incentive to adjust their consumption patterns to changes in world market prices.

Economic policy once again continued to push for accelerated growth, strengthening the hand of the counter-reformers. But the fast-paced expansion of domestic investment and consumption were unsustainable in the long run in the face of rapidly deteriorating terms of trade and new trends in the world economy to which Hungary was not adjusting. Large sums were invested in poorly conceived investment projects. The systemic inefficiencies and policy mistakes were financed partly by large foreign borrowing that contributed to the balance of payments crisis that reached its crescendo in 1982; its consequences are discussed in the author's companion essay in this volume.

G. 1979–84: New Reform Measures

1. OVERVIEW

Subsequent to a 1977 party decision to undertake a new, long-term reform program, during 1977–79 the government worked out the details of an initial set of reform measures, introduced in 1979 and 1980. Further reform steps were taken during 1980–84, including the preparation of a comprehensive new reform program. The 1979–84 partial reforms can be viewed as returning the economy to its NEM course and setting the stage for a major new advance in moving toward a regulated market economy during the second half of the 1980s. During this period the most significant reforms were in the structure of economic institutions, and the regulatory mechanism, especially the new price system, with some notable changes in the planning methods also.

2. WHAT PROMPTED THE RENEWAL OF THE REFORM PROCESS?

The rapid rise in Hungary's convertible currency trade deficits during 1973-78—caused by a series of external economic shocks, policy mistakes after 1972, and shortcomings in the economic mechanism—pushed foreign debt to such uncomfortably high levels that the authorities concluded during 1977-78 that the highest priority must be given to improving the trade balance to avoid eventual forced debt rescheduling. It was acknowledged that the 1973-77 attempt to isolate the economy from the adverse impact of world market developments could not be continued and that the complacency and inflexibility of many enterprises was largely a consequence of the prevailing economic mechanism which also tended to insulate producers from the economy's balance of payments pressures. The problem was attacked on two fronts: reducing significantly the growth rate and introducing austerity measures, and deciding to try to improve the efficiency and world-market orientation of producers.

The 1979-84 reforms took place in a very difficult economic environment, in contrast to the 1968-72 period, caused by the greater than expected deterioration in the terms of trade after 1978, the prolonged Western recession and growing protectionism hurting exports, the rapid rise in the real rate of interest on foreign debt, and the serious deterioration in the East-West financial and political environment that made it impossible for Hungary for a time to obtain new loans or refinance its maturing debt. Further problems were the declining demand and growing supply difficulties in the CMEA whose other members faced economic adversities similar to (and in many cases worse than) Hungary's. The combined impact of these developments forced Hungary during 1982-84 to introduce austerity measures much tougher than planned. The austerity program partly helped and partly hindered the implementation of the new reform measures, as will be indicated. But the deteriorating external environment strengthened, on balance, the resolve of the authorities to go ahead with reforms. A consensus developed that since heavily trade-dependent Hungary cannot look either to the CMEA or to the West ot help solve its problems, the country must seek an economic mechanism that forces its firms to become more efficient and to adapt better to world and regional market conditions.

3. PARTIAL REFORMS IN THE STRUCTURE AND FUNCTIONS OF ECONOMIC INSTITUTIONS

Recognizing that significant competition between producers is indispensable for an efficiently functioning market mechanism, a series of steps were taken: several trusts and large enterprises were broken up into smaller units; setting up new small and medium-sized business ventures in the socialized sector was facilitated; the scope of legalized private sector activities was expanded and restrictions on them eased; some competition in the foreign trade field was introduced; the size of the central bureaucracy was cut to provide fewer opportunities to meddle into enterprise decisions; new methods of appointing enterprise managers were introduced; and new financial institutions were created.

a. Selective breaking up of large producing units

Many of Hungary's large trusts and mammouth enterprises were huge not because they were modern, large-scale, assembly-line producers but because formerly independent firms were organized into large units to facilitate central planning. In industry especially, the organizational structure combined the disadvantage of small numbers, limiting competition; relatively small plants, foregoing economies of scale; and a lack of a network of subcontractors, contributing to high costs [Balassa]. Many large producers thus became monopolists and behaved as powerful lobbies, preempting much of the country's investment, skilled labor, and imports, obtaining large subsidies without notably improving the quality and modernity of their output and adapting flexibly to new circumstances and opportunities on the world market. When specialized firms and activities began to thrive after 1968, they helped trigger the "counterreform" by large firms that often succeeded in amalgamating the new competitors or curbing their activities through regulation. One consequence of this state of affairs was a rapid expansion during the 1970s of second-economy activities—often illegal or untaxed—especially in construction (e.g., home building) and service (e.g., automobile repair), where the performance of the large firms was notably inadequate, making it possible for some persons to earn unusually high incomes, which superficially appeared to be an outcome of the NEM. A further result was poor labor discipline at large firms, though this problem had numerous other causes also.

A new cabinet-level committee chaired by the Minister of Finance was established in 1979. It directed the branch ministries to prepare reports on designated trusts and large enterprises under their jurisdiction and make recommendations whether they should remain single units or be broken up into independent enterprises. Based on the reports and on its own analysis, the committee recommended that 14 of 28 trusts and a significant number of mammoth enterprises be eliminated and their components set up as independent enterprises. Many of these were in the *food* (e.g., soft drinks, alcohol, beer, sugar, confectionary, poultry, canned goods), the *service* (e.g., long-distance trucking, automobile service, electrical appliance repair) and the *trade* (e.g., agricultural machinery and implements) sectors but other branches (e.g., tobacco, coal mining, and machinery) were affected also [Ritter]. Additionally, several trusts and large enterprises that continued in existence had some plants detached and made independent. The main criteria were whether a unit formerly had independent status and the consideration that neither technically efficient scale of production nor meaningful vertical integration should be damaged by the reorganization. During 1979–83 about 300 new enterprises were created by reorganization. An example is the famous Csepel Iron and Metal Works Trust employing 20,000 people, with annual sales of 20 billion forints (approximately $500 million). The trust became insolvent in

1979 and was given three years to try to become profitable. Since it continued to lose money because it was inflexible, oversized, not cost effective, and the major investment projects carried out in the second half of the 1970s did not bring the expected results, on July 1, 1983 it was broken up into 13 independent enterprises [Csepel]. The work of the committee continues but at a slower pace since the most obvious cases were already handled.

b. New enterprise forms in the socialized sector

Small Enterprises.—Since 1982 the law provides that enterprises designated "small" can be established by ministries, national authorities, or local councils, mainly by detaching as independent firms existing plants or units, but also by establishing new ventures. One purpose is to complement the activities of large enterprises, that is, to let small, independent firms perform those tasks that in a market economy large firms typically subcontract because the manufacture of specialized finished products, parts and components is not suitable to assembly-line operations. A further purpose of is to serve better the consumption needs of the population.[5]

Small enterprises were always regulated somewhat more flexibly than the large ones; in 1982 their flexibility was increased further. Earlier restrictions regarding the type of activities a small firm may engage in and the number of persons it may employ were lifted and regulations concerning pricing, bookkeeping, and taxation were simplified. In brief, entrepreneurial behavior is encouraged [Ritter]. The founder cannot withdraw funds from it nor subsidize losses. If a small enterprise becomes unprofitable and cannot obtain loans to cover its loss, it must shut down [Tardos, 1983a]. Between the beginning of 1982 and October 31, 1983, 202 small enterprises were established [*Heti Világgazdaság,* January 7, 1983].

Small Cooperatives.—Small cooperatives outside agriculture of 15 to 100 members, operating with a simplified system of accounting and regulation as compared with the regular cooperatives, may be set up since 1982. If membership is less than 30, no executive has to be selected and all important questions are decided by all members. Units of a cooperative may be operated independently under a contract with a group of its members [Tardos, 1983a]. By October 31, 1983, 238 small cooperatives were operating [*Heti Világgazadaság,* January 7, 1984].

In recent years, state enterprises and cooperatives themselves were given the legal right to establish the following three types of new business ventures.

Joint Ventures.—Since 1977 enterprises and cooperatives have been authorized to join with one or more other firms to found joint ventures as legally independent entities. The founding firms appoint and dismiss its management, are responsible for its debts, dispose of its profits, and decide if the joint venture is to be disbanded. The state plays no role and will provide no subsidies. By the end of

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[5] Fields where setting up small enterprises are especially encouraged include [Ritter]; industrial repairs (e.g., of machinery and transport equipment); food industry (e.g., manufacture of frozen foods, meat products, confectionary, canned goods); construction (building renovation, repair and maintenance); local freight and passenger transport (e.g., taxi service); services to the population (e.g., drycleaning, barbers and hairdressers, photography shops, networks of small stores, repair and leasing facilities, restaurants); and certain tourist facilities.

1983 state enterprises founded about 50, cooperatives about 170 joint ventures.

Associations.—Since 1980 it became legal for two or more enterprises or cooperatives to set up associations to handle designated tasks, usually some kind of service. They differ from joint ventures in that they are not legally independent, separate profit centers; their purpose is to support the work of their parents. Approximately 30 such ventures were registered during 1980–83 by state firms, about 20 by cooperatives.

Subsidiaries.—In 1982 enterprises were authorized to set up one or more subsidiaries. These are legally independent profit centers; the parent is legally fully responsible for their activities. About 90 such units were founded during 1982–83.

The purpose of promoting the enumerated new types of business ventures in the socialized sector is to encourage enterprises to become more independent and flexible, to facilitate the better utilization of existing capacity, and to transform inflexible captive workshops and offices of large firms into competitive, profit-oriented units.

c. *Enlarged the scope and eased restrictions on private activities*

Significant steps were taken to enlarge the scope of legalized private business ventures outside agriculture also. A key feature of this trend is not so much the increased privatization of the economy but, first, legalizing certain activities that previously may not have been fully legal and were thus carried out in the underground economy and, second, moving from an adversary to a cooperative relationship between the state, the cooperative, and the private sectors. These strategies follow the example of agriculture where giving greater scope to private initiatives and incentives and integrating small and large producers were pioneered during the last 20 years, with excellent results. The following sections describe recent reforms to expand the type and scope of legal private business ventures.

Enterprise Contract Work Associations.—Prompted by the success of the many ingenuous incentive arrangements operating in agriculture, concerned with the growing participation of workers of state enterprises in the private second economy and its adverse impact on factory labor discipline and faced with the need to achieve better capacity utilization, a January 1, 1982 law made it possible for employees of state enterprises (also other individuals, see below) to set up so-called enterprise contract work associations (ECWAs). ECWAs are groups of workers—2 to 30 people—who enter into a contract with an enterprise, typically the one that employs them, to carry out either those extra tasks that would be profitable for the enterprise to implement but could not be done owing to a shortage of labor, or those currently performed tasks that can be done at a lower cost through the new arrangements. ECWAs are not independent legal entities yet are separate from the enterprises; they are partnerships of private individuals assembling voluntarily to perform tasks on their own time, usually the evening and weekends. They do not have independent financial means, take no risks, and make use of the facilities of the enterprises and the tools provided. The initiative to form an ECWA may come either from a group of workers or from enterprise management, the latter deciding whether such a unit can be formed, what type, whether on a temporarily or permanent basis, and the maximum working hours of its members, typically 50 to 70 hours per month. Management must approve membership but cannot assign workers; participation is by self-selection and typically involves the best workers. Of key importance for the enterprise is that the money paid to an ECWA is not subject to any kind of wage tax, which provides increased flexibility for management; for the participating workers, that they are able to increase their earnings. The number and significance of ECWAs have grown rapidly. By the end of 1982 2,775 ECWAs with about 25,000 workers had participated [*Heti Világgazdaság,* July 23, 1983]; by October 3, 1983 8,730 ECWAs were operational, involving close to 10[illegible]0 workers [*Heti Világgazdaság,* January 7, 1984]. Compensation through ECWAs has partly the character of overtime work and partly that of income from legal "second economy" activities. ECWAs are preferred by workers over regular overtime because the rate of pay is about three times higher (without this incentive the best workers would not be willing to put in the extra hours); by management because it provides a flexible new instrument to find and motivate labor whose use is not constrained by excessive wage taxation.

Similar arrangements are also possible outside state industry. In agriculture, ECWA-type of arrangement have been operating for some time. In 1982 nonagricultural cooperatives were also authorized to establish so-called "industrial- and service-cooperative special groups" (during 1982, 477 were formed). The essence of all of these arrangements is to increase capacity utilization and obtain additional labor by providing attractive personal compensation arrangements.

Independent Contract Work Associations.—In addition to ECWAs affiliated with enterprises and the "special groups" in the cooperative sector, in 1982 it became possible to set up independent contract work associations (ICWAs) also, that is, groups whose members are not affiliated with a single enterprise, cooperative, or farm, so that they are essentially private undertakings. Organizationally and legally they are similar to ECWAs but in substance they are more entrepreneurial and private since their members organize, invest own capital (or lease capital and facilities from the socialized sector), and find work without assistance, i.e., they take risks. The ICWAs manufacture for or provide services to enterprises, cooperatives, budgetary organizations, or the population. By the end of 1982, 2,341 unaffiliated ICWAs were set up; by October 31, 1983, 4,463 were in operation. About half of their members work for the group full time, the others hold main jobs elsewhere and contribute to the group on a part time basis [*Heti Világgazdaság,* July 23, 1983 and January 7, 1984].

Facilities Leased or Auctioned to Individuals.—Another new form of business is the contracting or leasing of facilities or certain operations to private individuals (who then may employ others) or to private groups.[6]

Eased Other Private-Sector Restrictions.—During the last few years the restrictions to open and operate a private business were eased and petty regulation of what such a business may or may not do simplified and reduced. For example, whereas before 1980 it took considerable red tape to obtain a permit to become a private artisan or repair person or to open a store because it was up to the local authorities to decide whether a proposed private facility was needed on a particular location, today persons who are over 18, qualify by training, and have the required capital cannot be denied a permit. Artisans may operate without any territorial limitation and, together with merchants, may employ a maximum of three outsiders and the help of six family members in the business [Tardos, 1983a].

d. Enlarged foreign trading rights and competition

The NEM gave direct foreign trading rights to a few large enterprises and made it possible for FTEs to become partners or agents of firms producing for export. The trend to decentralize foreign trading decisions was accelerated after 1980 and the idea that some FTEs should face domestic competition introduced. By January 1982, 160 firms enjoyed direct foreign trading rights, only 45 were specialized FTEs; by September 1983 211 firms could engage directly in foreign trade. About 60% of firms exporting machinery may trade directly (the bus producer, IKARUSZ, is the main exception); however, in light industry nearly 100% of exports continue via FTEs. A small number of FTEs have been recently authorized to trade in any product; in other cases the product line assigned to FTEs overlap, also to create competition. Approximately 100 foreign-trade partnerships are operating between FTEs and one or more producing enterprises.

e. Streamlined the ministerial bureaucracy

In 1980 three industrial ministries were merged into a single Ministry of Industry, cutting personnel by about half. A principal reason for the change was to reduce the opportunities for direct supervision of enterprises. As long as the administrative network inherited from before 1968 remained intact, enterprise managers often found it convenient, sometimes as a matter of habit, to seek the ministries' advice even on issues that the managers were now supposed to decide. The main responsibility of the new superministry is industrial policy. To be sure, some of the supervisory functions of the old ministeries were turned over to other national organs, most importantly, to the National Material and Price Office (NMPO), which—as its name implies—has responsibility not only for designing and enforcing the new price rules but also for strengthening market equilibrium in "material supply" (discussed below).

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[6] There are three main forms of leasing [Ritter]. *Fixed-Lease Operations.* Facilities, usually in the service sector, may be leased by a cooperative to a group of its members or by a firm to a group of its employees. Operating conditions and terms are specified in a lease contract entered into with the leader of the group who may employ a maximum of 15 persons. They may operate in all fields that are not a state monopoly or a public utility. Improved efficiency of operations may increase substantially the income of the group. *Auctioned-Lease Operations.* The operation of a facility owned by an enterprise or cooperative may be leased or the performance of certain tasks may be contracted out to outsiders, not more than five persons, who form a legal association, for a period not exceeding five year [Tardos 1983a]. Terms of the lease or task performance are stated in the contract won by the qualified highest bidder; he or they in turn may employ other persons. On October 31, 1983 186 legal associations were operating, down from 227 a year earlier [*Heti Világgazdaság,* January 7, 1984]. *Auctioned Facilities.* State enterprises and cooperatives are authorized to auction off certain of their facilities for the performance of certain tasks to private individuals. The difference between this and auctioned-lease operations is that here the lessee has greater freedom. For example, in the case of a restaurant he may remodel the facility and operate it more or less as he sees fit; auctioned-lease operations are more like franchises. To operate an auctioned facility the lessee may employ up to 15 persons; his income is taxed the same as that of a private artisan or merchant.

f. New method of appointing managers

A successful reform introduced in agriculture in the early 1960s was letting collective farm members elect democratically the president of the unit. Outside agriculture, even after the NEM was introduced, enterprise managers and their deputies continued to be appointed, rewarded with bonuses, promoted, and dismissed by the ministries or other supervisory organs. This tethered relationship obviously restricted the independence of enterprise managers. Of course, as long as the state both owns and regulates state enterprises it is difficult to envision an alternative system of management selection. Nevertheless, three significantly new approaches tackled this problem.[7] Since 1983, important top managerial positions are being announced in the form of public tenders, inviting applications from qualified persons. The screening is by a committee of 8 to 10 persons, of whom only 2 are ministry representatives, the rest are experts, such as retired managers of similar enterprises. An important part of the screening is a discussion of a candidate's proposed long-term business plan for the firm. In 1983 there were about a dozen such tenders in state industry, each eliciting a large number of applications. The committee's recommendations were accepted routinely by the Ministry which of course obtains party clearance beforehand. (During a recent three-year period only 2 of the 70 candidates suggested by the Ministry of Industry were reportedly rejected by the party.) Also new is that the appointment of a director is for an agreed upon 3 to 5 years only, not indefinitely as earlier. A new decree stipulates that the director's performance must be reviewed formally every few years. A further change is that as of 1983 the director not the Ministry appoints the chief executive's top management team.

g. New financial intermediaries and instruments

Both before and after 1979 Hungary has had a highly centralized banking system. The dominant institution is the Hungarian National Bank (HNB), simultaneously the central bank, fiscal agent of the government, and the country's dominant commercial and development bank. Most enterprises keep their accounts, borrow working capital and obtain investment finance from the HNB. Certain of its tasks are relegated to formally independent or subordinated banks: the State Development Bank,[8] the National Savings Bank,[9] the Hungarian Foreign Trade Bank,[10] the Central Exchange and Credit Bank Limited,[11] the Central Corporation of Banking Companies,[12] and to several small "mutual development funds." [13] All these financial organizations except the small funds are essentially traditional CPE banking institutions in that they are agents of the state, play more of a supervisory than business partner role vis-a-vis enterprises, and their prime purpose is not profitability but the implementation of the macroeconomic plan by following government lending guidelines. In one important respect, however, they have been operating somewhat differently since 1968 than banks in traditional CPEs: greater weight is given in their lending decisions to the expected rate or return and greater use is made of interest rates. While the government designates the credit amount to be allocated for specific purposes, which firms obtain how much credit under a given program may in part be decided by competition between firms. But neither enterprises nor banks are guided strictly by profitability in their investment and credit decisions.

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[7] Based on presentation by Mrs. A. Deák, Chief Economist of the Ministry of Industry, to the 7th U.S.-Hungarian Roundtable on Economics, Budapest, December 1, 1983.

A series of reforms introduced since 1979 have created several small, but in their totality modestly significant new financial institutions, more profit-oriented than the old ones. The purpose of some is to attract foreign capital, others represent the first steps in creating an institutional framework for domestic financial intermediation.

The Central-European International Bank.—CIB was established in 1979 as the first and so far only offshore bank in a CMEA country. It is the only joint venture in Hungary in which Western partners hold a majority ownership. The HNB owns 34% of the $20 million subscribed capital shares, six West European and Japanese banks the rest. It is authorized to conduct commercial banking in covertible currencies without being subject to Hungary's foreign exchange laws and regulation by the HNB; it cannot engage in local currency or transferable ruble deals. The CIB's portfolio includes loans to firms in the West and the East [*The Wall Street Journal,* November 10, 1981]; in recent years it is increasingly oriented toward prefinancing the CC exports of Hungarian enterprises [*Heti Világgazdaság,* May 7, 1983]. It paid dividends for the first time from its 1983 earnings [*Barron's,* December 26, 1983].

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[8] The State Development Bank is responsible for helping to finance state investments through preferential loans to enterprises and budgetary organizations; other state investments are financed through direct allocations from the state budget.

[9] The National Savings Bank, with an extensive branch network, is the bank for the local government units and the public. It provides a wide range of general banking services to individuals, loans to the private business sector, and handles foreign exchange transactions with tourists on behalf of the HNB. Its principal sources of funds are time deposits of individuals, invested mostly in long-term loans to individuals for housing.

[10] The Hungarian Foreign Trade Bank handles about 20% of the country's convertible currency transactions, mainly those involving small- and medium-sized enterprises, countertrade and industrial cooperation deals and the country's jointly- or independently-owned enterprises abroad. Based on authorization from the HNB, it grants short-term import and export credits and investment credits for export-capacity expansion.

[11] The Central Exchange and Credit Bank Limited, owned fully by the HNB, engages in all types of commercial banking and foreign exchange transactions which for the most part are affected through its branch in Vienna, the Central Wechsel- und Creditbank A. G. In Hungary, the Bank sponsors a fund for the market-oriented development of inventions and innovations (Appendix 1); obtaining its capital partly from the state budget and partly from a portion of the HNB's profits.

[12] The Central Corporation of Banking Companies conducts transactions related to international and in some cases domestic real estate deals and supervises and assists the activities of wholly-owned foreign firms and joint ventures operating in Hungary.

[13] "Mutual development funds" mostly finance innovation and technical development projects in the country. Several of the funds were established jointly by the State Technical Development Commission (STDC) and the respective branch ministries; others were set up by national associations of industrial, agricultural and service cooperatives (OKISZ, TOT, SZOVOSZ are the Hungarian acronyms); still others were put at the disposal of local government units for the benefit of enterprises under their jurisdiction. On the sources side, these funds have some of the characteristics of financial intermediaries because they collect funds from several of the enterprises and cooperatives they support; on the uses side, they are not really financial institutions because in most cases provide only nonrepayable grants, not loans or equity finance.

Bank Accounts for Foreign Depositors.—Since 1982, Hungary has been advertising its willingness to open secret accounts for depositors from the West. These can be opened at branches of the National Savings Bank, which offer internationally competitive interest rates and protection from snooping by foreign tax authorities. By year-end 1983, several thousand West European, American and Arab depositors reportedly had set up accounts [*Barron's,* December 26, 1983].

Venture-Capital-Type Financial Institutions.—A government decree in 1980 provided the legal framework for establishing small new financial intermediaries. During the four years, 1980–83, about a dozen new financial institutions or "arrangements" were created to provide financial banking for pursuing inventions and innovations, to support small private, cooperative and state business ventures, and to back promising new export-development and export-marketing projects. Their operation is tied closely to the establishment of small new business firms discussed earlier so that they, too, represent institutional reforms to introduce more competition and stimulate entrepreneurship. These venture-capital type institutions are different from the "mutual development funds" (described in footnote 13) because they either provide loans that the borrower must service or equity (i.e., contributions to the investing enterprise's development fund) for a contractually agreed annuity or dividend-type profit sharing arrangement. Thus, they are partly financial intermediaries and partly investment associations that take risks. Since setting up new business ventures, pursuing innovations, and developing new markets involve risks, they fill a need for venture capital that the traditional financial institutions are not well suited to provide [*Heti Világgazdaság,* December 24, 1983]. Appendix 1 lists the main venture capital institutions, the total funds at their disposal, sources of funds, the purpose of their activities, and their investment guidelines.[14]

A reform of potential significance is that a government decree, effective January 1, 1983, has given enterprises, cooperatives, financial institutions, and local government entities the right to issue and purchase bonds. The main stipulation is that the issuer must state for whom the bonds are intended and the bonds must be issued through a bank. If the bonds are to be purchased (exclusively or also) by the population, they must be government guaranteed and therefore approved by the state which sets the maximum rate of interest; if intended to be purchased only by other enterprises, it is neither guaranteed nor regulated [*Heti Világgazdaság*, April 9, 1983].

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[14] During 1982, financial institutions other than the HNB (that is, the banks listed in footnotes 8 through 12, the "mutual developments funds," the CIB and the new venture-capital-type financial institutions) combined provided loans totaling 8.4 billion forints ($210 million)—of which the main banking institutions contributed 4.9 billion forints ($123 million), various mutual development and venture capital "funds" 3.5 billion forints ($88 million)—the equivalent of 36.5% of the sum of investment credits provided by the HNB [Bácskai, pp. 68–69].

The new types of financial institutions and instruments represent important first steps in creating new instruments and institutions for financial intermediation. When developed more fully, these should increase enterprise profit and personal income incentives, help mobilize voluntary savings by enterprises and especially the population, and aid in solving problems in production and service. More generally, financial intermediation helps reallocate capital from less to more productive uses, for which no effective mechanism exists in a traditional CPE.

While the handful of bonds issued and the new financial intermediaries established during the last few years represent pathbreaking developments in a CPE, so far these have been of only minor importance in improving capital allocation. Until significant further reforms are carried out, the investment choice for the population is either to build housing, buy real estate, or open a savings account, and for enterprises to invest in their own operations or leave the money on time deposit.

h. Assessing the institutional reforms

The main objective of the institutional reforms has been to increase entrepreneurship and competition. The extent to which this has been achieved in industry, construction, and the service sectors is difficult to judge. Examples of such an impact are mentioned in the press, noting for example that today there are competing firms offering software services, that consumers can find a better assortment of alcoholic beverages, soft drinks, and certain other food products, and that the taxi service has improved notably in the capital. At the same time, it is one's impression that Hungary still has a long way to go before the enterpreneurial spirit outside agriculture and the still small private cooperative sectors really takes hold. The basis for this judgment is both quantitative and qualitative. On October 1983 a total of 134,000 persons were involved in small enterprises (202 units), small cooperatives (238), special cooperative groups (1,022), ECWAs (8,730), and ICWAs (4,463) [*Heti Világgazdaság*, January 7, 1984]. They represent only about 3% of the nonagricultural labor force, most of them involved in one of the two types of CWAs, which do not contribute much to interenterprise competition. The number of small- and medium-sized firms is still quite modest.

A well-reasoned and documented Hungarian article assessing the performance of the top 20 giant industrial firms concluded that only two, Rába (a machine manufacturer) and Medicor (a manufacturer of medical equipment) excel in the international arena [*Heti Világgazdaság*, September 17, 1983]. The key to unlocking competition in the state sector outside agriculture is for firms to become much more independent and profit-oriented. This will happen only after other components of the economic mechanism have been fundamentally reformed also. The measures taken through 1984 can be seen as necessary and important steps that help to create the institutional-legal preconditions for competition, but by themselves do not really bring it about.

4. FURTHER REFORMS IN THE ECONOMIC REGULATORS

The set of reforms in the price system has been very important but significant reforms were introduced in the wage system also.

a. Further reforms in the price system

Hungary's dilemma has been that in the absence of significant domestic and import competition it dare not allow most prices to be freely supply and demand determined. On the other hand, domestic prices must be adapted continuously to changing relative prices on the world market and the automatic recovery of costs by domestic producers cannot be allowed. On January 1, 1980 Hungary introduced an ingenuous and complex industrial producer price system to try to achieve the latter objectives without giving free reign to monopolistic supply forces. The new, so-called "competitive price system" is a set of rules for forming producer prices by industrial enterprises accounting for about 70% of industrial output. Of the remaining 30% of output, the prices of about two-thirds (i.e., 20% of the total) are generally determined by domestic market forces. Competitive pricing means that the prices of energy, raw materials, and selected semimanufacturers, regardless of sourcing, are set equal (approximately) to current world market prices and that *changes* in the domestic producer prices of manufactured goods are tied to the firm's export performance on the convertible currency markets by pricing rules, which themselves have been evolving.

During 1980–83, the domestic prices of manufactures in the competitive sector were formed by enterprises following three rules. The first rule was that the price level of domestically marketed goods cannot increase more rapidly than the price level of goods sold on the convertible currency market, the latter computed in forints at prevailing exchange rates, plus a rebate of tariff-like taxes. The rationale was that firms should be allowed to pass on to domestic buyers only those cost *increases* that they are able to realize on convertible currency sales also.

The second rule was that profitability on domestic sales can be no higher than profitability on convertible currency exports. This was designed to discourage the export of less profitable items (requiring centrally determined rules of allocating overhead) on the one hand, and to stimulate enterprises to negotiate the best possible CC export price, on the other.

The first two rules applied to enterprises, not products. Firms were free to set individual product prices on the basis of bargaining with buyers, provided that the third rule, which is product specific, was observed, namely, that individual product prices can be no higher than the actual or hypothetical convertible currency import price. (In most cases this meant the latter because few domestically produced goods compete with convertible currency imports.)

In those industrial branches where enterprises must follow competitive pricing rules, firms that export less than 5% of output for convertible currency must follow the prices of a designated "leading" firm. The rationale is that enterprises that have no significant convertible currency exports are likely to be weaker performers and therefore should not have an easier situation than firms that do export. Approximately one-quarter of competitively priced manufacturing output is produced by "follower" enterprises. In the manufacturing sector, competitive pricing rules apply to firms that account for approximately one half of manufacturing output. Excluded are most firms in the food industry (because many farmgate and consumer prices are administered), branches without significant CC exports, and firms whose structure of CC exports is significantly different than that of their domestically sold products.

The fundamental objective of the competitive price system is to simulate what domestic prices would be if firms were facing significant competition, thus forcing them to make better input and production decisions. It is readily conceded that a competitive market would set prices better than the imperfect substitute that is now in place. But even though the system is not fully market based, it marks a significant progression from full central planning because it provides enterprises more flexibility to make decisions and because it allows market forces to influence prices.

The competitive price rules have been modified continuously since 1980. Most of the modifications were designed to reduce the rigidities of the system that prevent enterprises from doing what a firm in a competitive market situation would do; others were exceptions granted to support unprofitable firms. The majority of the exceptions are said to be in the first category and relate to providing additional incentives for CC exports or import substitution; the importance of propping up unprofitable firms by exempting them from the pricing rules has been decreasing since 1980.

The prevailing price system continues to evolve. In 1984 significant modifications were introduced. The essence of the new reform steps is gradually to ease the administrative restrictions so that pricing decisions of more and more firms can be guided by market considerations. Since 1984, manufacturing firms subject to competitive pricing belong to one of three groups, subject to progressively less restrictive set of rules. The rules in the first category are the same as before, i.e., firms remain subject to each of the three pricing rules explained above. Firms in the second category need not observe the second rule (i.e., the export profitability constraint), to enable them to follow more flexibly world market conditions and thus increase CC exports. To belong to the third, so-called "price club" category, firms must apply and prove that the competitive conditions they face and their own price policies will insure that they will not pursue monopolistic practices. Firms belonging to the "price club" (a poor designation because it implies collusion whereas the exact opposite meaning is intended) are subject only to the rule that their domestic prices can be no higher than the actual or hypothetical cost of imports. But "price club" members, too, must obey rules on "unearned" profits, whose essence is that unconventional price rises may have to be justified, otherwise the center could exercise its temporary veto power. Initial reports suggest that during the first half of 1984 enterprises accounting for about 20% of manufacturing output were able to join the "price club." During 1985 membership is projected to account for 40–50%; by the end of 1986 only poorly-performing firms will continue to be bound by more restrictive price rules [*Magyar Nemzet*, November 19, 1983, p. 7]. The classification of a firm depends largely on its competitive conditions on the foreign and domestic markets. In designating the firms and the rules, the authorities are trying to maintain a balance between giving enterprises more freedom to make pricing (and other) decisions so that they can learn to function in a real market environment, and limiting their market freedom to constrain them from taking advantage of their monopoly power and other imperfections in the market mechanism.

Farmgate prices of most agricultural products are set by the authorities annually, largely on the basis of the national average production costs of individual products, taking into account their incentive on production and their impact on farm incomes. The rudiments of the present system were introduced in the late 1950s and adjusted continuously since. The incentive system has been a key factor in the impressive growth of agricultural production, yields, and exports.

In both agriculture and industry there is a small but gradually increasing segment of production, about 10 to 20% of output, where producer prices are uncontrolled and are allowed to be fully supply and demand determined. (It is to be noted that in Hungarian terminology, industrial prices set according to the rules of competitive pricing are also called "free prices" even though the meaning of the term is not the same as when prices are truly set by supply and demand forces.)

In the economy's other sectors, cost-plus pricing generally continues to prevail, though with certain modifications in the way this operated under traditional central planning. In 1983 a potentially significant step was taken in the construction sector: the limited introduction of competitive project bidding whose winner can set prices more freely, but this system has not yet taken hold widely.

In traditional CPEs there is no close relationship between producer and consumer prices. Basic foodstuffs and other necessities are relatively inexpensive, thus often subsidized; most other goods are relatively expensive, as compared with what they cost to produce or relative to prices in market economies, because they are heavily taxed. Turnover tax and consumer price subsidy rates bridge automatically the difference between producer and consumer prices so that turnover tax and subsidy rates play no role in consumer price formation. Basically, this mechanism was operating in Hungary until 1968.

Between 1967 and 1979 the producer price level increased and its relative prices changed considerably in response to a more comprehensive definition of cost, increased incentives for agricultural producers, and price developments on the world market which increased Hungary's import prices more rapidly than export prices. However, the 1968 reforms did not alter significantly the level or structure of consumer prices established during the early 1950s, which therefore deviated increasingly and very substantially from the structure of costs. Net turnover taxes declined as rising producer prices and stagnating consumer prices required increased subsidies so that by 1976 the average level of consumer prices actually became lower than the level of producer prices;[15] since 1980 the consumer price level has been higher by a few percentage points, depending on the timing and extent of changes in producer and consumer prices.

The 1980 price reform introduced a direct link between world market and producer prices and increased price flexibility, as was described above. It was a further objective of the price reform to reestablish a two-tier price system, i.e., one where consumer prices would be, on the average, significantly higher than producer prices, and to move more rapidly toward making consumer prices proportional to producer prices, except where state preferences were to continue. This is being achieved gradually by letting free market prices find their own level and by increasing selectively administered consumer prices, which in many cases involves reducing the subsidies on them. Although, strictly speaking, the rate of inflation is not a systemic but a policy issue, since traditional CPEs prefer almost absolute retail price stability, it is of note that during the second half of the 1970s, consumer prices began to increase, at a 4-5% rate during 1976–78, 9% during 1979–80; and 5-8% annually since then. The authorities, who control effectively the consumer price index, have used inflation as a tool of demand management, to reduce subsidies, and to re-establish gradually a two-level price system.[16]

There is limited price flexibility in the consumer sector also. The proportion of free prices is now greater than 50%, but various rules on price formation mean that only a fraction of that total is set exclusively on the basis of supply and demand, the rest are only affected in varying degrees by market forces.

b. Reforms in the wage system

Wage and income regulation are tremendously complex and have been altered frequently since 1968. Wage regulation is a component of the system of economic regulators through which the authorities influence the actions of enterprises. Just like the price regulation, wage regulation is strongly influenced by how the overall economic system functions. As long as enterprises have monopoly power on the domestic market and managers are not motivated strongly by profitability, there will be insufficient countervailing power at the enterprise level to wage push pressures. Wage regulations thus serve as the countervailing power, just as the complex price rules substitute for competitive market forces. For this reason, any fundamental reform in wage regulation can come only as part of further comprehensive reforms in the economic system.

In recent years managing the CC payments crisis has required economic austerity, a key aspect of which is the stagnation or decline in real wages. Although the rate at which the wage mechanism that is in place will permit nominal and real wages to increase in a given year is a matter of economic policy not system, highly restrictive wage policies have an adverse impact on incentives and productivity, and thus limit the favorable impact that other system reforms may have. This is especially because significant unemployment has not been permitted.

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[15] Further details about the price system can be found in [Marer, 1985].

[16] Details on Hungary's inflation mechanism and policies can be found on pp. 278–280.

To describe recent reforms, the basic features of the wage system since 1968 is sketched.

Labor income has two main components: wages and salaries and profit-sharing distributions; their sum is called earnings. (Since 1982 employees may derive income also from participation in ECWAs—an important new reform measure discussed above (p. 250)—conceptually an entrepreneurial-type income, practically it is like wages). The center regulates all labor payments at the enterprise level by rules and by taxes. The formulas on how earnings that will be available in a given year will be distributed are set in the annual collective agreements negotiated between enterprise manager and enterprise-level trade unions; payments to ECWAs are determined on other basis, as was indicated. In cooperatives, the collective agreements must be approved by the unit's general assembly.

The center sets basic wage and salary brackets by categories of skill and working conditions. Within the unskilled categories the range is about 50% between the top and bottom levels; in the skilled categories the range is about 100%. Ever since 1957 these ranges have increased, most recently in 1984, to provide greater flexibility to managers to differentiate between workers. Therefore, widening the range within and between the categories may be considered an economic reform measure.

Since 1968 wage increases and profit-sharing distributions have been linked in various ways to enterprise profits. The essence of the system is that various rules determine how large an increase in the average earnings of a firm will be tax exempt; increases beyondthose levels are taxed at steeply progressive rates, currently beginning at 300% and rising steeply to 1,500% (!), limiting the growth of earnings and thus effectively controlling real wages.

One reform introduced in 1983 was that the tax on annual profit-sharing distributions beyond maximum levels (in 1984, 2% of the wage bill) became lower than the tax increases (100% to 500% on the former vs 300% to 1,500% on the latter) to give enterprises an incentive to design good systems of profit-sharing in preference over the more or less uniform wage increases that were typically provided until 1983. While the idea is a good one, the tax rates on both are still so restrictive that their incentive effect of the measure may not be substantial.

Another reform changed the rules for determining the average wage increase at each enterprise exempt from taxes. Before 1983 the increase in average wages exempt from taxes was a function mainly of the increase in enterprise profitability, irrespective of the level of profitiability, so that in many cases efficient and profitable firms were in a less favorable position to grant wage increases than firms that improved profitability slowly. As of 1983, tax exempt wage increases became a function of the level of enterprise profitability and wage bill savings generated by reductions in the work force. (Currently 30% of wage-bill savings may be used to increase tax-exempt wages.)

The shortcomings of the prevailing system of wage regulation are widely recognized in Hungary but the legacies of industrial organization, the need to control inflation, and the requirements of austerity demand management do not allow basic reforms until fundamental improvements are introduced in the entire economic system. As a preparation for that, new wage regulation systems were introduced experimentally in 1983, then modified and additional experiments added in 1984. Their thrust is increasing the tax on the total wage bill, which at present is very low, while reducing the progressivity of the tax on increases in compensation. The purpose of the experiments—which in 1983 involved 30 state and cooperative firms employing about 100,000 persons—is to ascertain whether more rapid increases in wages are likely to yield better economic performance. Preliminary results suggest that they do.

Perhaps the most important reform in this area is the ECWA (discussed earlier), which may also be viewed as an experiment pointing the ways in which factory work can be better organized, managed, and compensated.

Reforms in enterprise income regulation

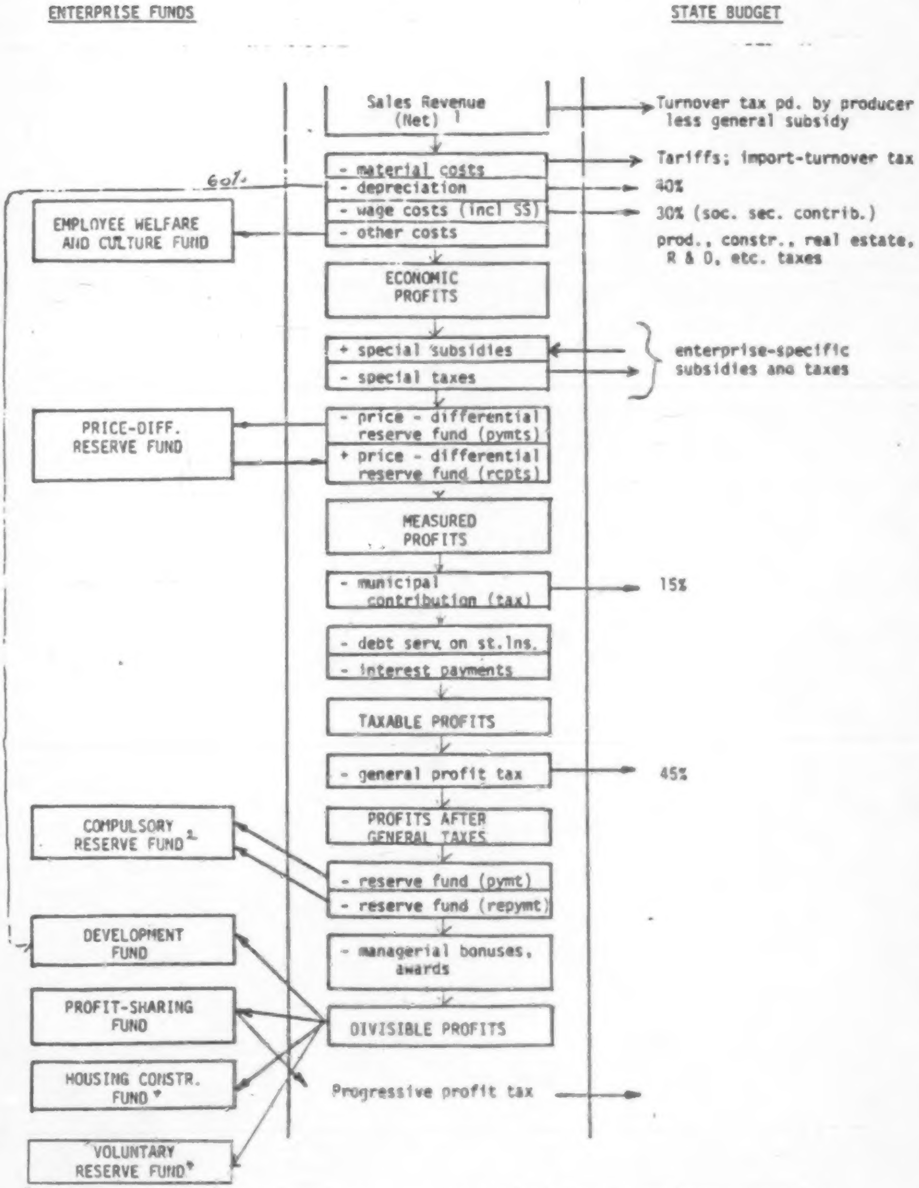
The price and wage regulation systems already described are two of the main instruments the center uses to control the profitability of enterprises. Enterprise incomes are regulated, further, by the following mechanisms:

- —Enterprises must compute revenues and expenses in a prescribed sequence and taxes on profits are levied not once but at several places in sequence. The accounting and tax rules are more prescriptive than those commonly employed in market economies.
- —Enterprises must allocate after-tax profits into enterprise funds from which money can be spent for prescribed purposes only.

Very important also for the understanding of the system and its impact on enterprise behavior is to note that the rules and regulations concerning wages, the computation of income, the payment of taxes and the use of enterprise funds are frequently changed. For example, in 1983, 9% of the amounts placed into the Development Fund (DF, explained below) were confiscated as a new austerity measure to cut investments further.

The prescribed sequence in which enterprises had to compute revenues, expenditures, profits, taxes and create various enterprise funds in 1983 is shown in Figure 1. The basic scheme shown in Figure 1 has been in effect, with some modifications, during 1976–84. The main difference between the system operating between 1968–75 and since 1976 is that the compulsory division of Profits After General Taxes into the various funds was discontinued. Since 1976 enterprises decide how to divide after-tax profits into the various funds, although they are strongly influenced by tax rules and other considerations.

Fig. 1 The System of Enterprise Taxation, 1983


ENTERPRISE FUNDS
STATE BUDGET
Sales Revenue (Net) 1
Turnover tax pd. by producer less general subsidy
- material costs
Tariffs; import-turnover tax
- depreciation
60%
40%
- wage costs (incl SS)
30% (soc. sec. contrib.)
- other costs
prod., constr., real estate, R & D, etc. taxes
EMPLOYEE WELFARE AND CULTURE FUND
ECONOMIC PROFITS
+ special subsidies
- special taxes
enterprise-specific subsidies and taxes
PRICE-DIFF. RESERVE FUND
- price - differential reserve fund (pymts)
+ price - differential reserve fund (rcpts)
MEASURED PROFITS
- municipal contribution (tax)
15%
- debt serv. on st. lns.
- interest payments
TAXABLE PROFITS
- general profit tax
45%
PROFITS AFTER GENERAL TAXES
COMPULSORY RESERVE FUND 2
- reserve fund (pymt)
- reserve fund (repymt)
DEVELOPMENT FUND
- managerial bonuses, awards
PROFIT-SHARING FUND
DIVISIBLE PROFITS
HOUSING CONSTR. FUND 4
Progressive profit tax
VOLUNTARY RESERVE FUND 3

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[1] After payment of general turnover taxes that may be levied on the producer and receipt of general subsidies.

[2] Discontinued in 1984. [3] Introduced in 1984. [4] Replaced in 1984 by a profit reserve fund.

Source: [Kállai] and Figyelö, various issues in 1984.

An important new feature of income regulation is the distinction between Economic Profits and Measured Profits. The former shows the profits (losses) attained after receiving (paying) general subsidies (taxes), that is, those that are not enterprise specific. Thus, the concept of Economic Profits is the most meaningful indicator of performance.

Economic Profits adjusted by enterprise-specific subsidies and taxes plus net transactions with the enterprises' "price differential reserve fund" yield Measured Profits.[17]

Measured Profits serve as the basis for computing enterprise profitability, the latter in turn influencing how much tax-free wage increase it can give and progressive income tax it must pay on amounts placed in the profit-sharing fund (PSF), as explained under wage regulations. Profits After General Taxes serve as the basis for forming, in designated sequence, various enterprise funds.

The first payment is into the "compulsory reserve fund," which may be used only to cover losses, to supplement (under very restrictive rules) the PSF, to help finance increases in working capital, and to repay loans obtained to finance the fund itself. The restrictions are so severe that money placed into this fund was considered by firms practically like a tax.

Next, managerial bonuses and awards (decided by the authorities) are paid. From the Divisible Profits that remain, enterprises must allocate to the DF at least as much as needed to meet the DF's obligations—debt service on state bank loans, amounts needed to finance increases in working capital, and certain payments to other enterprises—taking into account other transfers that flow into the DF (mainly the 60% of depreciation) and the funds carried over from previous years. Additional amounts to finance enterprise investments may be placed into the DF. It is up to each enterprise to allocate Divisible Profits between the last four funds shown in the southwest quadrant of Fig. 1, but the decision is significantly influenced by taxes. Whereas there is no additional tax on amounts placed in the DF, steeply progressive taxes are levied on amounts spent from the PSF, in fact the amount placed there must be large enough to pay the progressive tax on wage increases and profit-sharing distributions, as were described above. There is no tax on profits placed into the reserve funds.

A significant 1984 reform is that the compulsory reserve fund was dissolved because of a consensus that the tax burden on enterprises must be reduced. At the same time, the need for continued austerity did not allow the accumulated funds to be released. Hence the compromise of allowing enterprises to retain a small portion (about 10%), confiscate the largest part, and continue to freeze the rest by the, in effect, compulsory purchases of 4% interest-bearing bonds. Legally the bonds are marketable only to other enterprises but since higher risk-free interest can be earned on savings deposits, de facto the bonds have no market. It is hoped that eventually the bonds can become marketable, which will depend on further reforms in the financial system. As part of this reform the rules regarding the creation and disposition of the voluntary reserve fund were changed. Renamed "voluntary profit reserve fund," and enlarged with the 10% share of the distributed compulsory reserve fund, contributions to and allocations from it are now fully voluntary. Funds transferred to it from Measured Profits (after the municipal contribution) will not be taxed further until used either for investment or profit sharing, at which point the taxes applicable to the respective funds will be levied. It is hoped that the new rules will encourage voluntary and long term savings by enterprises and thus promote both long term strategic planning and the development of new savings that may be tapped by financial intermediation as the financial system develops.

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[17] A "price differential reserve fund" may be formed from the difference between the CC export price in foreign currency in the current and in the preceding year; that is, profits arising from changes in the exchange rates cannot be the basis. The fund may be used to smooth price or profit fluctuations on CC exports. The amounts placed in the fund are not taxed until used.

Rules of depreciation also became more flexible: the number of depreciation rates was reduced and enterprises may choose from among alternative write-off methods.

5. FURTHER REFORMS IN METHODS OF PLANNING

After the 1980 abolition of several branch ministries and the changed role of the new super-Ministry of Industry, the earlier formal "plan coordination" discussions between the enterprises and their superiors in the ministry was discontinued. In some sectors, enterprise plans are now surveyed by research institutes not subordinated to central planning bodies. Enterprise plans are aggregated and compared with the macroeconomic plans formulated by the center. Discrepancies between the two are investigated to suggest whether, and what kind of, response might be needed. If the comparison reveals that the center was mistaken, its plans will be adjusted; alternatively, if the center decides that its plan should prevail, then the regulators influencing the relevant producers and consumers, or the foreign trade plan, may be adjusted. Since 1980 the National Material and Price Office has been given additional responsibilities for maintaining market equilibrium in sectors and key products. At the branch and commodity group levels an important role is played in this endeavor by consultative price and product committees on which producers, consumers, distributors and central agencies are represented. Prospective disequilibria may be eliminated through consultations between producers and buyers, leading to revised agreements, or by recommending that the center influence demand or supply by fine-tuning the relevant regulators or by altering exports or imports.

V. Prospective Reforms, 1985–1990

A. The Need for Further Reforms

Many Hungarian economists and policymakers assess realistically the achievements and shortcomings of the prevailing economic mechanism. The consensus is that a great deal remains to be done to improve macroeconomic resource allocation and the efficiency of microeconomic resource use. A consensus has been building for some time that there is a need to undertake a new round of comprehensive, interlocking set of reforms that would make a concerted attack on the remaining shortcomings of the system. During the first half of 1984 decisions have been reached at the highest levels of the party (see the April 17, 1984 statement of the Central Committee) and the government that a comprehensive set of reforms, tackling simultaneously the planning system, the institutional structure, and the regulatory mechanism, should be introduced during 1985–87. The broad outlines of the new set of reforms has been published or can be pieced together from discussions in the Hungarian literature, but in some areas the details apparently have not yet been agreed upon as of mid-1984. Implementation will be a phased one, governed by economic, administrative, social policy, and political considerations.

The theme of the new round of reforms is to improve the implementation of the principles of the NEM: to create a well-functioning market mechanism while retaining social ownership of the means of production and the economy's central guidance. If the set of reforms will be implemented as planned, its significance will match that of the 1968 NEM.

The new set of reforms is designed to attack three central problems of the economic system: continued limitations on enterprise autonomy, persisting weaknesses of the price, wage, and tax systems, and the need to create a mechanism to openly articulate and help reconcile economic conflicts between interest groups, such as management vs. labor or resource allocation between population groups, sectors, and geographic regions. To give a fuller account of the need for further improvements and what the prospective reforms are about and intend to accomplish, next I link specific shortcomings of the system with the reform remedies and suggest the most likely timetable of implementation.

B. Increasing Enterprise Autonomy

Six sets of interlocking factors limit enterprise autonomy in the prevailing system: (1) the continued tethered relationship between managers and the state administration; (2) insufficient competition; (3) need to fulfill CMEA trade agreements; (4) weak profit-interestedness of managers; (5) the functioning of the economic regulators that limit enterprise freedom over pricing, wages, and the use of profits; and (6) an underdeveloped financial system.

1. RELATIONSHIP BETWEEN ENTERPRISES AND STATE ORGANS

In a traditional CPE, producers are hierarchically dependent on the center, their chief task is to implement plan directives. In Hungary's reform concept, producers would be autonomous; the center would influence producers only through monetary and fiscal policies and the economic regulators. But in fact, enterprise managers have remained formally dependent on state authorities through the founding and liquidating of firms and the appointing, rewarding, and dismissing of managers. While collective farms and cooperatives in all sectors can be founded at the initiative of the members, state enterprises of significant size can be founded only by state and local government organs (small companies, including subsidiaries and joint ventures of state enterprises, can be founded by operating state firms). A legal entity can be liquidated by those who found them.

Since setting up an enterprise is an entrepreneurial function, in the future new firms should be established mostly as subsidiaries, partnerships or joint ventures, at the initiative of operating firms and banks, rather than through the reorganization of existing units. The basic principle should be that only those who command the financial means—enterprise development funds, bank credits or equity, and grants from the state—should be empowered to establish new firms.

More important from the point of view of enterprise autonomy is who appoints, evaluates, pays, and dismisses the managers. Collective farms and cooperatives elect their own managers; those of small firms founded by other enterprises are appointed by the parents. But branch ministries or local councils designate the directors of other state enterprises. The bonuses of top management, on average accounting for about one-third of income, are decided by the supervising state organs.

The reason for these institutional arrangements is that the state is simultaneously the owner and the regulator of the firms and these two economic functions are intermingled. Those who exercise these functions in behalf of the state—the ministries, other state bodies with national responsibilities, the HNB, the local councils, and organs of the party—have various administrative responsibilities and concerns and thus are not oriented sufficiently toward the long-term financial results of enterprises. Consequently, producers don't receive unambiguous instructions and don't face clear and consistent expectations by those who evaluate them. Even when profitability is taken into account, for instance, when managerial bonuses are decided, the view is typically short run: how does performance this quarter or this year compare with that of the previous period.

> Under such circumstances, common sense prescribes a cautious, bureaucratic behavior for the management of enterprises instead of courageously weighing entrepreneurial opportunities [Tardos, 1982, p. 305].

In the view of the reformers, an important part of the solution must be to separate state ownership from state administration so that the ownership functions of the state could be exercised more purposefully.

Numerous proposals have been made on who should exercise ownership functions.[18] It is generally agreed that nonprofit organizations, such as those providing health, education, and cultural services, public utilities that are natural monopolies, defense production, and perhaps a few of the mammoth enterprises of strategic, national importance, should remain under the direct control of the state [Tardos, 1982, p. 303], possibly subordinated to a watchdog superagency (patterned after the U.S. General Accounting Office?) whose only job would be to evaluate whether these organizations perform their assigned tasks efficiently. There is no need to change procedures for collective farms and cooperatives whose members, through the general assembly as the highest decisionmaking body, already have the right to establish new units, elect top management, and exercise other ownership functions. Similarly, it is also clear who is the legal owner of subsidiaries and joint ventures founded by state enterprises, and of course also of private business. The focus is on those profit-making enterprises in the competitive sector that are currently subordinated to a government organ—where most manufacturing firms belong.

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[18] One interesting proposal that received considerable publicity in the West also but is considered unfeasible by most Hungarian economists is entrepreneurial socialism, proposed by Liska. For details and criticisms of entrepreneurial socialism, see [Bársony] and the five-page feature article on Liska in *The London Economist*, March 19, 1983.

After considerable discussion of alternative proposals by economists, government officials and party organs, a decision was made to introduce the following system as of January 1, 1985]*Figyelö,* May 31, 1984 and *Heti Világgazdaság,* July 7 and November 17, 1984].

Firms will be classified into three categories. Public utility-type firms ("budgetary organizations"), enterprises engaged in defense production, and designated other large firms will continue to report directly to state organs that will appoint, evaluate, and dismiss management, as before. Enterprisesd operating as part of a trust arrangement may remain under direct state guidance (e.g., those producing or marketing energy, meat and grain) or could be placed into one of the other two management categories.

Other large enterprises—generally those employing more than 500 persons—will be managed by an enterprise board. These will be made up of the directly elected representatives of the work force (50%) and the designated representatives of management (50%). In the latter group, directors of subsidiaries, plants and certain other units will have automatic membership on the board, while one-third of management representatives are appointed by the enterprise's director. The board confirms or appoints the director, with the state (and thus implicitly also the party) retaining the right of veto. The selection is to be made on the basis of tenders submitted, which must include a proposed business plan for the enterprise. The board will make decisions by simple majority on such strategic issues as approving the annual plan, sourcing and marketing strategies, and disposition of profits; more than simple majority would be required to decide such vital issues as enterprise reorganization or the appointment of a director. Earlier proposals that the state be also represented on the board, with one third of the vote, lost support owing to the perceived danger that, on the one hand, the arrangements would make continued state intervention into enterprise affairs easier and, on the other, that the boards might turn into forums for enterprise-initiated bargaining with the authorities [*Figyelö,* June 7, 1984].

In smaller enterprises—generally those employing fewer than 500 persons—the general assembly of all employees or a council elected by them would be the top decisionmaking body. Each permanent worker (those employed for at least a year, or perhaps longer, to be decided by the workers when they draft the new articles of incorporation) would have one vote. Since a general assembly consisting of more than 2-300 workers cannot be an effective decisionmaking body, if a firm employs a greater number, an elected assembly would take the place of the general assembly. In either case, the legal foundations of such a firm would have many similarities with collective farms and cooperatives, except that the employees would not legally own, only operate the firm's assets.

(That the employees eventually may become part owners of the firm is not excluded.)

It is interesting to note that the arrangements proposed for the smaller firms share certain similarities with Yugoslavia's workers' council system, but there are important differences in the legal framework and decision procedures. The Hungarian view is that the Yugoslav system gives rise, especially in large firms, to certain contradictions and the bureaucratic manipulation of workers that its new system hopes to avoid ([Tardos, 1982, pp. 306-307] and [Kopatsy, pp. 222-227]).

In Hungary, representatives of such organs as the trade unions and the party will participate in an advisory capacity in sessions of the enterprise board or general assembly (council), where they can offer advice and attempt to pursuade, but they will have no votes as representatives of the union or the party as such.

Guidelines about classifying enterprises into one of the three categories are being prepared jointly by the branch and functional ministries. At the beginning of 1985 enterprises will begin formulating proposals of implementation. They may also initiate procedures for reclassification into a category other than where they were initially placed. All and all, for the majority of enterprises the new system is expected to be operational by the end of 1986.

Presumably, current management has a mixed reaction to these changes, as each speculates whether it may lose its position or the advantages of dependency relations with superior state organs, or whether it may gain from a reduction of state interference. One may wonder also whether these new, democratic institutions will become—similarly to other kinds of institutional changes introduced before—mere formalities, since most enterprises have insufficient decision authority on such strategic areas as pricing, wage increases, imports, or access to resources for a significant investment. An official of the Ministry of Finance involved in designing the managerial reforms responded to these concerns this way:

> It is perfectly understandable that a segment of enterprise managers has reservations. It is true also that creating new types of enterprises will not, by itself, cure our economy's problems. But I believe that the modernization of enterprise management partly presupposes and partly will spur the creation of a more predictable system of regulation, market orientation, a freer disposition of enterprise earnings, and a wage system more in tune with labor market conditions. The need to prepare further reforms in these areas is recognized by the Central Committee also. There is a close relationship between the modernization of enterprise management and further reforms; without democratizing the hierarchical relationships, it is not possible to envision real independence of economic decisions [*Heti Világgazdaság*, July 7, 1984].

2. COMPETITION

To create a viable market mechanism, competition between producers is essential. Its absence contributes to enterprise complacency and forces the authorities to administer prices and wages instead of letting them to be largely market determined. That in turn focuses managerial attention on state regulation instead of market forces. Several reform steps could increase competition:

Further industrial deconcentration, i.e., the breaking up of excessively large production units. This process, began in 1979, reportedly will continue, with decisions taken on a case by case basis.

Encourage the formation of new enterprises, including subsidiaries and joint ventures with domestic and foreign partners. Progress in this area is partly a matter of continuing the policies begun in 1979 and partly that of significant further reforms in the financial system (see below) to create profit-oriented commercial banks and additional, adequately-funded venture capital institutions.

Abolish the "profile" restrictions on firms outside agriculture also. This reform is expected to be a part of the institutional reforms outlined above and may be introduced as early as 1985.

Hardening the "soft budget" constraint, which means reducing subsidies and letting inefficient enterprises that perennially lose money be reorganized, absorbed by others or go bankrupt. Initial reforms in these areas are underway now (see below); they are expected to be implemented more forcefully as of 1985.

Allowing significant import competition. Although import regulation is a policy issue, the idea that in a CPE domestic producers should be exposed to direct import competition is so radical that moving in that direction would constitute a system change. Hungarian policymakers appear to recognize the importance of import competition but its introduction is hindered by the country's severe CC balance of payments situation. Therefore, progress in this area will depend on whether and how rapidly the CC constraint can be eliminated.

3. FULFILLING CMEA TRADE AGREEMENTS

Enterprises may have to settle for imports from domestic or CMEA suppliers over preferred imports from the West because the state has signed a trade agreement or because a shortage of CC constrains the licensing of alternative sourcing. On the export side, enterprises or plants producing for the CMEA market often do not face the kinds of competitive pressures that would force improvements in performance since the state is expected to provide whatever resources are necessary to fulfill export contracts. Although various incentive mechanisms rewarding the improved efficiency of producing exports to the CMEA have been introduced in recent years, the effective interlocking of the Hungarian and the CMEA mechanisms has not been satisfactorily resolved.

The following reform proposal has been made [*Figyelö,* June 7, 1984, p. 3]:

> Trade with the CMEA countries should be the responsibility of special, state-administered, *bilateral* [relaciós] *center* enterprises. They would implement transactions between domestic enterprises and CMEA partners on the basis of inter-state agreements. Vis-a-vis the CMEA partners these organs would have the same level of authority and title—e.g., the director would simultaneously be a deputy minister—as those who are negotiating in behalf of the partner CMEA country, while vis-a-vis the domestic enterprise sector they would function as business partners, i.e., as a customer or supplier. This organizational solution would make it possible for producing enterprises to be linked through a market mechanism in their CMEA-relations also.

I have no basis to speculate if and when this proposal will be implemented. It is clear that being locked into the CMEA trading system in which partner entenprises are not independent and profit oriented, represents a serious constraint on granting full independence to many Hungarian enterprises also.

4. PROFIT-ORIENTATION AND FINANCIAL ACCOUNTABILITY

In any economic system producers must have a clear-cut objective for taking decisions. Hungary's economists and policymakers have come increasingly to accept economic theory's conclusions that profits are the best measure of producer's net contribution to national income, provided that prices are market clearing and that there is sufficient competition. A manager—of a capitalist firm in the West or of a publically-owned enterprise in Hungary—will be profit oriented only if his income and job security are tied mainly to the long-term profit performance of the unit managed and he is given a high degree of authority for making decisions. This should not be interpreted to mean that successful managers must make all decisions simply to maximize profits, but rather that profit-making is the most important, or at least a very important goal [Grossman].

Hungary's economic system and institutions have become much too pluralistic to make a sweeping generalization about the strength of the profit motive. It appears that the motive is quite strong in agriculture, the cooperative, and the private sectors. Profit-making is also important for managers of large industrial firms because tax-free increases in average wages and capacity expansion are linked partly to profitability and because low profitability or loss-making can lead to reorganization, with a likely outcome of management change. At the same time, however, as long as the manager's autonomy is constrained in the many ways indicated, his profit-orientedness remains much weaker than envisioned in the reform blueprint. Therefore, central to the recommendations of Hungarian reformers is to strengthen the profit motive. Price subsidies, state investment grants, subsidized credits, etc. that perpetuate a "soft budget" mentality of the recipients will have to be reduced. It is the recommendation of reformers to eliminate subsidies whenever possible and to replace grants to enterprises in the competitive sector with financially sounder arrangements. Important steps in this direction have begun to be taken in recent years and the trends will continue. The reformers also hope for a more "open" discussion and decision process about what to do with large loss-making enterprises. The matter of subsidies is important also because if resources are poured into the preservation of loss-making firms, there will be insufficient money left to allow the efficient ones to expand, especially in the new, slower-growth environment of the 1980's when total investments will not be increasing rapidly.

Assuming that the institutional and price reforms outlined earlier and below will be implemented, a further fundamental problem needs to be addressed. Profitability today and tomorrow is in part a reflection of decisions made yesterday, at a time when the rules of the game were different. Therefore, many enterprises will be able to compete on equal footing only if their assets are valued realistically, that is, revalued. But the country does not as yet have a capital market to evaluate objectively the productivity of assetts, the profitability of proposed projects, or the caliber of a firm's top management. Therefore, creating a market for capital would have to be an integral part of the reform package; ideas of how this may be done are presented below.

Increased profit-interestedness also requires that enterprises have the right to dispose their after-tax profits more freely; this is regulated rather comprehensively in the current system (see Fig. 1).

5. IMPROVING THE ECONOMIC REGULATORS

A requirement of an efficient market mechanism is to let certain of the economic regulators—prices, wages, asset values—to be largely market determined. Let us recall its main impediments: weak competition, inherited disequilibria in the price, wage and tax systems and in the economy's "real" sectors. Improving the regulators is thus partly a matter of reforming the institutional structure to create more competition and partly that of reducing price, wage, and tax distortions. To be sure, all of these matters are interrelated and mutually re-enforcing. For example, competition can be increased also by freeing more prices and wages, so that it would be counterproductive to wait until all of the regulators are "perfect." Whether and to what extent a regulator can be freed is a question of timing, of pace, of choosing the right sectors, involving judgments about trade-offs and willingness to accept certain costs.

Reforms in the price and wage systems will be discussed in the next section, but let us recall that the intention is to let prices in the competitive sphere to be increasingly market determined. This is being implemented continuously by freeing an ever larger number of firms from more and more of the administered pricing rules. The goal is that by the end of 1985 nearly half, by the end of 1986 the majority of firms should be able to determine domestic prices largely free of restrictions, actual or hypothetical import price being the principal limiting factor.

Wage regulation, too, is to be freed gradually. As early as 1985 enterprises may be placed into three or four categories for wage regulation purposes. Those that face significant competition on the external or domestic markets will be given freer hands to set wages on the grounds that competition serves as a counterveiling power against inflationary wage increases. There will be corresponding institutional improvements in the labor market mechanism, such as the further development of employment offices, retraining centers, and perhaps some toleration of transitional unemployment.

Enterprise income regulation is a very important regulator that must be improved; what the reforms intend to do is discussed under reforming the financial system, below, and under improving the tax system, in Part C.

6. REFORMING THE FINANCIAL SYSTEM

Further reforms in the financial system would do a great deal more to facilitate increased enterprise autonomy. These would involve creating a profit-oriented commercial banking system and new or more extensively used financial institutions and instruments. Commercial banks would become business partners of enterprises, taking the place of the monobank, an institution that presently serves simultaneously as a commercial banking system, the government's fiscal agent, the central bank, and supervisor of the enterprise sector. Consequently, enterprises have both an administrative dependency and a fiduciary partnership relationship with the HNB.

Concerning reforms in the financial system, there is an emerging consensus that it is essential to separate the central and commercial banking functions of the HNB and to develop a competitive commercial banking system. It is considered important to have an independent central bank whose main job would be to implement monetary policy and supervise the commercial banking system, and independent commercial banks serving as profit-making financial intermediaries. It is interesting to note that such a reform has recently begun in China, a

> * * * reform of great significance in developing and implementing China's monetary policy. . . . This separation of functions is meant to centralize and improve control of the flow of financial funds and to achieve an overall balance between the demand for and supply of credit, in order to serve better the purposes of Chinese macroeconomic policy [*IMF Survey*, October 24, 1983].

There are different views on the need for and the best timing of such reforms as well as alternative reform proposals. The latter range from simply separating within the HNB the central and commercial banking functions to making the commercial banking function independent of the HNB. Under the latter version, commercial banks would compete for business both in their lending and deposit-taking activities. To achieve real competition, commercial banks would not specialize in serving enterprises exclusively on a branch or regional basis. The banks would become investment advisors, creditors, and business partners of enterprises, not agents of the state checking compliance with government priorities ([Asztalos], [Huszti], [Tardos, 1982]).

It is interesting to note the views of J. Fekete, influential first deputy director of the HNB, which he expressed in reply to a question put to him on Hungarian television [Interview, p. 11]:

> Q: Many people think that the National Bank of Hungary is in a monopolistic position, it is too strict, and exercises control with too many conditions over enterprises and this sometimes disturbs them.
>
> A: This is true insofar as there are such opinions. Yet I would like to prove its opposite. I think that one of the basic principles of our reform is the autonomy of enterprises, of which I am an ardent advocate. . . . But if enterprises will become autonomous . . . then the owner has still to look what the enterprise does with this great autonomy. If the owner is the state, it needs an organization which objectively decides whether the enterprise works well or poorly, depending on whether it has profit, whether it can repay its debts or not. I am for the greatest possible enterprise autonomy along with the greatest possible financial control to make sure that the enterprise will be in conformity with the national economic interest. If this is not so, the financial organs can call attention to this danger. This does not mean necessarily a single bank, there may be several smaller banks with different tasks, but the control over the economy must not be lost.

If Fekete means that firms peforming poorly should suffer fully the consequences of their decisions (assuming that enterprises have autonomy and that factor and product prices are not distorted), then that would be consistent with the thrust of most reform proposals. Of course, full financial accountability could then be enforced by the commercial banks. If, however, Fekete means that enterprises in the competitive sector must conform to state priorities even at the expense of profit-making, then this would not be consistent with the greatest possible enterprise autonomy.

More recently, the President of the HNB, M. Timar, was asked [*Heti Világgazdaság*, February 25, 1984, p. 5]:

> Professional circles often contend that the HNB implements simultaneously central and commercial banking functions, a duality that prompts compromises. Are you not thinking about "detaching" the commercial banking function?

Timár's reply [ibid.]:

> So far we do not consider it proven that in an economy where market conditions are limited, where improvements in the economic mechanism have not been always consistent, and where (and when) investments must be restricted and where maintaining the economy's external equilibrium is the highest priority, a two-tier banking system would be better than the prevailing, not-quite-one-level system.

Question:

> Still, would a two-tier system not ease your tasks? If the commercial banking function would be detached, perhaps monetary policy would be less constrained by its impact on the financial hardships that it creates for enterprises.

Reply:

> Precisely for this reason do we want to separate better within the HNB the central and commercial banking functions. . . . This of course cannot be done overnight. Furthermore, I would not rule out that at a later stage of development this question should be reexamined. But this requires more than just a decision. On the one hand, world economic developments should be favorable for us, on the other, those changes in the Hungarian economic mechanism that, in my opinion, should precede the eventual possible changes in the banking system should be implemented within the next year or two. I refer, first and foremost, to the price-, wage- and enterprise-income-regulation mechanisms and to the further reforms of enterprise management.

My interpretation is that initially the central and commercial banking functions within the HNB will be separated, perhaps as early as 1985; more wide-ranging reforms may take place at a later date.

Concerning the introduction of new financial instruments, impressive first steps have been taken during the last few years in such areas as inter-enterprise credits and issuing bonds by enterprises. As new financial instruments are developed and their use spreads, new sources of funds can be mobilized and available savings more efficiently invested. In this context it is worth noting that one of the joint outcomes of the underdeveloped financial system, the continued administrative and financial dependence of enterprises on the center, and the weak profit-orientation of large firms is that enterprises tend to re-invest after-tax funds at their disposal without considering whether expanding (or maintaining) their own activities is the best use of such funds.

This is the main reason why simply decentralizing investment decisions to enterprises is not a perfect solution, since under the prevailing mechanism, most enterprises automatically invest in their own activities, not seek the highest rate of return [Sárközy, p. 20]. Therefore, significantly improved financial intermediation would require not only a competitive commercial banking system but also such new financial mechanisms as something resembling a stock market, for which proposals have already been made in Hungarian literature.

One concept is that state enterprises would be transformed into corporations. The par value of their shares would equal the book value of their assets. A market would then be created to establish, on a continuing basis, the value of the shares, reflecting the current and prospective rate of return on the corporation's assets. In some proposals only holding companies created for that purpose would be allowed to own and trade shares [Kopátsy]; others would allow banks, insurance companies, the social security fund, trade unions and other public organizations to participate also [Tardos, 1982]; still others would not rule out enterprise and possibly individual participation, although it is not envisioned that individuals would become more than minor stockholders in large firms.

The emerging consensus on this matter has recently been summarized in a leading Hungarian economic weekly [*Figyelö*, June 7, 1984, p. 3]:

> Absence of inter-enterprise transfers of capital—owing to a weak interest in wealth-maximization and the underdeveloped mechanism of asset valuation—has led many economists to conclude that the solution is to create *holding companies* whose exclusive task would be to maximize the value of the assets of the enterprises they were controlling. . . . This would insure that these holding companies would indeed be new types of market-oriented organizations, rather than being comparable to the old trusts and industrial associations that had administrative roles.
>
> The holding company would be directed by a *single person*, supported by an advisory body. The director would be appointed by a Parliamentary committee, possibly the Presidential Council or the Council of Ministers. The efficient functioning of a holding company would be facilitated if it could be based on a *bond and stock market* so that its own wealth and that of its subsidiary enterprises would be valued and traded in shares [emphases in the original].

The foregoing suggests that the creation of a stock and the further development of the bond market are under serious consideration. But since no decision has yet been made on the introduction of a stock market, it is not likely to come sooner than toward the end of the 1980s.

Creating a market for equity capital would make two important contributions to improving the efficiency of the economic system. First, it would solve the seemingly intractable problem of valuing realistically enterprise assets on the basis of their current and expected rates of return; the caliber of top management would be a factor in the assessment. Second, it would provide an important new mechanism to transfer capital from less to more productive uses, in several ways. Corporations would be required to pay dividends to the holders of their shares which could be ploughed back or invested elsewhere. New corporations could be established by issuing shares; existing corporations could expand by marketing additional shares. Changes in share values would help guide banks, other creditors, and investors in their decisions. And if shares could become an investment vehicle for corporations, cooperatives and possibly the general public (bank-managed mutual funds may be an ideologically acceptable vehicle), that would help mobilize risk capital and thus increase the economy's total savings.

C. Further Reforms in the Price, Subsidy, Exchange Rate, Wage, and Tax Systems

1. PRODUCT PRICES, TAXES, AND SUBSIDIES

When a CPE begins to reform its price system, it often takes mainly an accounting approach; its motto is that price is a matter of proper cost accounting. The first price "reform" measures stem from the realization that scarce resources are not free, so that cost tags must be attached to them, and that costs, including imports, should be more realistically valued. In Hungary this stage was represented by the 1957, 1959, and 1964 price improvements and adjustments.

Gradually, the conceptualization and measurement of cost becomes more sophisticated and more economic in approach. Issues such as the appropriate system of taxation and subsidization, whether average or marginal cost pricing should be used, how to determine exchange rates, and how market forces can influence prices, will be considered. This stage was represented by Hungary's 1968 reforms.

Prompted by rapid changes in relative prices on the world market, subsequently the price system will be modified so that costs can be realistic not only at the time of a reform but on a more continuous basis. Hungary reached this stage during the second half of the 1970s and tried to implement it as part of the price reform of 1980.

At present, the major remaining shortcoming of the price system is the excessive and nonuniform subsidization and taxation of goods and services at the producer and consumer levels, which still to some extent distorts relative prices, especially at the consumer level, and has created an unusual relationship between producer and consumer prices, as will be indicated.

In recent years Hungary has made significant strides to reduce subsidies both on production and consumption (an important reason for the accelerating rate of consumer price inflation) but there is still a long way to go before only those subsidies will remain that are clearly justifiable for reasons of social policy. Policymakers appear to be committed to further reductions in subsidies but can do so only gradually because of their impact on inflation and income distribution.

A very important remaining distortion attributable to the peculiarities of the Hungarian system of taxation and subsidization is the unusual relationship between average producer and average consumer price levels, shown in Table 1, which can be interpreted only by providing a brief historical perspective.[19]

Table 1.—*Hungary: Deviation of the consumer price level from the producer price level, 1949–84*

[Percent]

Period:	*Deviation*
1949	+18
1952	+63
1959	+18
1968	+5
1972	+3
1975	0
1976	−3
1977	−4
1978	−4
1980 (Jan. 1)	+3
1980 (average)	+1

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[19] This section is based on [Csikós-Nagy].

1981	+0.5
1982	+2
1983	+3
1984 (plan)	+6.5

NOTE.—The difference between the two price levels is measured by the ratio of turnover taxes net of retail price subsidies to the value of goods and services sold in retail at current prices. The numbers are not fully comparable over time due to changes in the sample and the incidence of net turnover taxes.

Source: National Material and Price Office.

After the large increase in consumer prices in 1951, a substantial gap opened up a favor of consumer prices, yielding large net revenues for the state budget. At that time the retail prices of foodstuffs were relatively high because very low farmgate prices were paid on deliveries. During the next two decades the average markup on producer prices declined because producer prices in industry, construction, and agriculture increased, in some years rapidly, while consumer prices did not. Producer prices increased because higher farmgate prices were paid, costs of production were defined more fully, and the exchange rates linking foreign and domestic prices became more realistic. Consumer prices increased little because there was a cap on retail price inflation, for political reasons. After 1973 the sharp increases in Hungary's foreign trade prices were allowed to be mirrored in part in producer but hardly at all consumer prices so that by 1975 the two price levels became identical and in the next few years the producer price level moved higher. During the second half of the 1970s consumer prices began to increase more rapidly: inflation rates accelerated to 4 to 5% during 1976–78 and 9% during 1979–80; since then inflation has continued at a 5 to 8% annual pace. As a result, the customary markup on producers prices began to be restored only after 1980.

In most countries consumer prices are significantly higher than producer prices; that in Hungary they are not, has created a series of problems:

—Having essentially a single-level price system means that on a net basis little or no taxes are levied on consumption. Since there is no general sales or personal income tax and agriculture is not a large source of revenue for the state budget on a net basis, the large budget expenditures that must be financed leave no alternative but to levy very high taxes on nonagricultural production and profits. This reduces significantly the profit-interestedness of enterprises, although profit orientation is supposed to be one of the main pillars of the NEM, and creates high industrial input costs for other sectors, notably agriculture.

—These features of the Hungarian price system also distort the relative shares of consumption and investment, understating the former and inflating the latter, and make it difficult to compute meaningful inter-sectoral terms of trade.

—Consumer prices being too low and industrial producer prices too high, on the average, requires corresponding subsidies and taxes, distorting the efficiency of production was well as consumption.

—A single-level price system (as was the case in 1980) is an important reason for the unusually large discrepancy between the forint's dollar purchasing power and its dollar exchange rate. Hungary's exchange rate reflects approximately the producer-price-based average cost of earning a dollar in CC exports. Having a single-level price system in effect means that the producer's "cost" of generating a dollar includes all of the taxes that in a market economy would be paid by the consumer. Moreover, since Hungary's CC export prices are low as compared with the prices that, say, West European exporters would be getting for similar products (reflecting the shortcomings of Hungarian marketing as well as Western discrimination), the resulting coefficient will yield an usually large number of forints per export dollar earned.

There is a consensus in Hungary that the consumer price level should be significantly higher than the producer price level, for the reasons stated. To achieve this is an important goal of planned changes in the price, tax, and subsidy systems. The changes will improve efficiency by reducing or eliminating the problems just listed.

2. THE FORINT/DOLLAR EXCHANGE RATE

How Hungary basically determines the exchange rate has already been indicated; how the peculiarities of Hungary's price, tax and subsidy system contribute to the very large discrepancy between the exchange rate and the purchasing power has also been noted. The large discrepancy in turn has created all kinds of controversies on the computation of Hungary's dollar per capita GNP, with implications for such important matters as the country's access to World Bank loans.[20]

Another issue of considerable importance for understanding the functioning of Hungary's economic system is the relationship between the exchange rate and the CC trade balance. Does exchange rate depreciation improve the trade balance?

In a market economy, a real depreciation of the exchange rate is expected to improve the balance of trade because it increases the relative prices of tradeables vs the nontradeables in domestic currency and because the inflationary impact of depreciation reduces real wages (unless there is full and prompt indexation), which constrains domestic demand, reducing imports and freeing goods for export. Price and income elasticities of exports and imports indicate the expected trade balance improvement. The institutional features of Hungary's prevailing price and wage systems and price and income regulation mechanisms operate so that the impact of a depreciation will not be the same as in a market economy.

In a market economy, a real depreciation of the exchange rate (one that more than compensates exporters for the difference between domestic and external rates of inflation) should improve the profitability of both industrial and agricultural exports. However, in Hungarian industry this will not change significantly the relative prices and profitability of tradeables as compared with those of goods sold domestically and on the CMEA market because prices changes on the domestic and profitability on both markets are tied directly to those achieved on CC exports by the pricing rules.

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[20] For a comprehensive discussion of the issues, see [Hewett, 1985] and [Marer, 1985]; for a summary, my contribution in volume 1 of this compendia.

A further reason why depreciation will not improve the balance of trade significantly is its impact on costs. Hungary's system of pricing energy, raw materials and many semimanufactures on the basis of the current world market price means that depreciation increases, practically instantaneously, the forint cost of these inputs even though the actual costs of imports from the CMEA and from domestic sources may remain unchanged. And since outside industry's competitive sectors, cost-plus pricing is more the rule than the exception, the relative prices of tradeables will not change significantly. Thus, both material costs and domestic prices are pushed up automatically by depreciation. Hungarian calculations show that a 1% depreciation leads to a .8% increase in industrial producers prices [Csikós-Nagy].

As far as depreciation improving the trade balance by reducing real wages, there are similarities in the way the mechanism operates in a market economy and in Hungary. But while in a market economy, exchange rate manipulation is an instrument for *influencing* real wages, in Hungary up to now the authorities have *controlled directly* nominal wages, the price level and thus real wages.

The conclusion is that, under Hungary's prevailing economic mechanism, depreciation probably cannot be relied on as a key policy measure to improve the balance of trade. However, the more the economic mechanism evolves toward a (less regulated) market economy and the greater will be the response of producers to price and profit signals, the more the exchange rate mechanism can function along traditional lines.

D. Creating Economic Conflict-Resolution Mechanisms

The need for linking economic and political reforms—and the direction in which the latter are likely to develop—was stated by one of the chief architects of the NEM, Central Committee (and former Politburo) member Rezsö Nyers at a 1982 Indiana University conference on Hungary [Nyers, pp. 215–18]:

> In connection with the further development of the economic reform, short-term differences in economic interests will openly manifest themselves through conflict in open forums; harmony between different economic endeavors must be found with political means. Conflicts of interest derive from the multisectoral nature of the economy. A system of representation of interest is already operating, though not yet fully, in the case of small ventures. Conflicts in the relations among enterprises and between enterprises and government agencies have to be solved. . . .
>
> The interests of enterprise management and the workers of the enterprises are in many respects identical, but conflicts of interest may also emerge here, and it is the trade union organizations of the enterprise that are called upon to reconcile them. . . . Differences in interest may further emerge between economic organizations and cultural and social-policy institutions in respect of the allocation of budgetary means, or in connection with the application of the principles of profitability.
>
> From all this it follows that the realization of the objectives of the economic reform depends to a large extent, beyond the economic mechanism . . . on the adequateness of the political mechanism. All this can be realized in Hungary without change in the leading political role of the party.

Once economic conflicts are acknowledged, it brings to the fore the essentially political issue of interest group representation: what organization is to speak, for example, for small business, for the managers of large enterprises, for the labor unions, for the different groups in agriculture, for the industrial cooperatives, for regions, and so on and what should be the mechanism for reconciling the conflicts?

One of the least known aspects of the economic reform cum political liberalization process in Hungary is the progress made since the mid-1960s to establish organizations that represent economic interest groups that are not simply rubber-stamping transmission belts for decisions already taken but lobbies of growing influence providing input into party and government decisions that affect them. It is in this context, for example, that the growing role of the legislative branch, Hungary's Parliament, has to be assessed. To be sure, its role is still far from that of comparable institutions in Western democracies but it is a far cry also from the facade it was during the 1950s.

The new task is to create meaningful, institutionalized arrangements where democratic participation in economic and certain political decisions can be practiced. Together with the prospective further reforms in the structure of economic institutions, this would contribute greatly to the further development, and irreversibility, of the NEM. Whether and how meaningfully the party will allow this is of coure an open question.

VI. Economic Reforms and Political Change

One of the most significant issues is the relationship in a CPE between economic and political change. For this reason, it is important to understand the past link between Hungary's economic reforms and political liberalization—which one is the cause and which is the effect? The relationship between politics and economic reform is an especially timely issue in Hungary as one seeks to understand how dependent is the reform process on the leadership of János Kádár, whose age (73) causes much speculation about what will happen after he is no longer at the helm. Is the reform process reversible, or is it irreversible regardless of who succeeds him? Hungary's experience may also shed light on reform prospects in other CPEs.

A. Political Strategy Since 1956, Under Kádár

János Kádár assumed power in 1956 as the Soviet Union put down the Hungarian Revolution. He spent the next few years consolidating power, using terror. But just as Hungarian society had been traumatized by the events of 1956, so also had been the party. The party realized that if it attempted to push society too far, the reaction could undermine its ability to govern. The party learned also while Stalinist methods of mass terror, show trials, high mobilization, demands for absolute allegiance, and discarding intellectuals could be useful for consolidating power, these methods cannot achieve political stability and sustained economic results [Schoepflin]. These considerations prompted Kádár, along with the leadership of other CMEA countries, to ease political tension throughout Eastern Europe, during the 1960s following Khrushchev's own more liberal policies in the USSR. Developments in the Soviet Union—

> * * * gave every East European party a measure of latitude as to how it would arrange its relations with the society it ruled [Schoepflin, p. 3].

The essence of Kádár's policy of liberalization was a gradual reconciliation between the regime and the people. In substantive terms this meant that the party:

—Discontinued calls for repeated affirmations of political loyalty, summed up in Kádár's well-known slogan, "he who is not against us, is with us," a symbolic reversal of the slogan of his predecessor, "he who is not with us, is against us."

—Retained ultimate political power in that the party has remained the ultimate arbiter of all major initiatives in the political, economic, and social realm, but it changed the scope and exercise of that power, focusing increasingly only on the important issues, giving more freedom to discuss alternative courses, and delegating the details of implementation. There are parallels between the changing scope and instruments of central planning and those of the exercise of political power.

—Granted all groups of the population gradual but significant improvements in the standard of living; this was halted in recent years by the economic austerity program.

—Enlisted the cooperation of the intelligentsia, giving its members increased freedom to employ their talents and express their views in public.

—Enlarged considerably the rights of citizens during the last twenty years. This means, first and foremost, no arbitrary arrests and secret police intimidation for those who do not exceed the limits of political tolerance (not always clear to define, except that the limits are much wider than before 1956 or in most other CMEA countries).[21] Also important is that the law provides increased protection for citizens against the bureaucracy of the state, not only formally but in substantive terms also.

—Allows society to remain much more "open" than one finds anywhere else today in the CMEA. Hungary's relative openness has innumerable manifestations, for example: encouraging Western tourists on a very large scale and imposing practically no limit on their interaction with the population; granting to most Hungarian citizens able to afford it the right of frequent travel to the socialist countries, and opportunities and foreign exchange every third year to travel to Western countries also; reciprocal abolition of visa requirements for travel to/from Austria and Finland; since 1983 allowing Hungarians with a concrete job offer to accept employment in Western countries for periods of up to five years (recognizing that some might not return); allowing in some Western newsprint and radio broadcasts; dealing reasonably objectively with polictically sensitive domestic problems and in a less biased manner with many foreign policy issues than the other CMEA countries; and giving considerable scope for legal, private or other second-economy activities.

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[21] For a period before the imposition of the martial law, in some respects Poland may have had as much if not greater political tolerance than Hungary.

In return for these concessions, the party expects that the population will not challenge the basic features of the country's political and economic system and the close political and military alliance with the USSR, and that intellectuals will exercise some self-censorship when dealing publically with politically sensitive issues. This of course means that by the standards of Western societies, public life in Hungary is largely apolitical.

"Concensus," "compromise," and "power sharing" are some of the terms frequently used to characterize the policies of Kádár. Whatever the label and the precise nature of the party's motives,[22] the arrangement clearly benefited both the population and the regime. For a Communist state, the people have considerable freedom to engage in economic and intellectual pursuits and have enjoyed notable economic benefits also. These gains are appreciated especially by those who remember what it was like in the 1950s and who are aware that the political and economic conditions are much less attractive elsewhere in Eastern Europe. Thus, Hungary's reforms appear much more radical viewed from the East than from the perspective of Western democracies. The party benefited because the arrangements have released some of the creative energies of the people, especially the intellectuals and those employed in agriculture. The regime has also achieved a degree of legitimacy—a measure of confidence in the eyes of the people. This in turn gives it greater room to manuever, to take risks, such as those entailed in economic reform. In the West, Hungary's carefully nurtured image of being a liberal and pragmatic communist country makes it easier to arrange commercial and financial deals with Western governments and private parties; given Hungary's economic dependence on trade with the West, this is not unimportant. In the East, the regime's policies are legitimized by its economic achievements and by the political stability the country enjoys, although its policies also engender ideological concerns about where they ultimately may lead it.

Hungary is unique not so much because it has pursued a course of political liberalization and economic reform but because it is the only CMEA country where the relatively liberal political climate introduced throughout the region in the 1960s has continued, though the movement was not always forward. Elsewhere in the CMEA the forces of conservatism were able to stop, and at one time or another even reverse the liberalization process. In my view, the trends and outcomes were determined largely by country-specific forces. In Hungary, the leadership of Kádár—who assumed his position with the help of the Russians, who therefore, one may assume, trust him—has certainly been an important factor.

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[22] Western interpretations of the party's motives range widely: some grant it the conviction that its liberal policies best serve the national interest, others believe that those are designed to make it possible to obtain large Western financial assistance, still others hold that Hungarian liberalism is a Kremlin propaganda ploy to convince the West that the Soviet Union does not dominate Eastern Europe.

B. Relationship Between Political Liberalization and Economic Reform

Political liberalization was an essential precondition for initiating market-oriented economic reforms. But once economic reforms were underway and yielded positive results, they contributed to further political liberalization.

Political change must precede Hungarian-type economic reforms, fundamentally because economic decentralization requires a substantial reduction of direct political interference in economic decisions. But there are other reasons also. A comprehensive reform like the NEM is an intricate mechanism. Since it has no precedent, no blueprint, it takes a great deal of expertise to design and put in operation. Such expertise can be developed only through a relatively free and open debate in which all sides can be heard and logic, not rhetoric, prevails. The remarkably free and open discussion of Hungary's economic problems and reform options during the 1960s was like a midwife to the reform and was made possible only because Hungary had a relatively liberal political environment since the early 1960s.

A further important reason why a significant degree of political liberalization must precede meaningful economic decentralization is the need for reliable economic statistics. Only after 1956 was Hungary's century-old tradition (itself important!) of producing and disseminating good economic statistics reestablished. Although there are still gaps, the set of economic data published in Hungary is the most comprehensive and by far the best quality among the CPEs and is readily available to economists in the country.[23] The importance of economic understanding and good data cannot be overestimated. In many countries economic reforms are stifled by the widespread absence of sophisticated economic understanding and by lack of opportunities to debate the issues freely. These problems are typically made worse by glaring shortcomings in the statistical system that often fails to disclose facts and provides an inadequate basis for the kinds of economic computations needed to design a feasible reform blueprint.

Once economic reforms show a measure of success and reach certain milestones, they generate pressures for further political change, by which I mean the role of the party vs other formal or informal institutions in economic decisions. In some respects this is self evident because as the role of the market expands, that of the bureaucracy is diminished. For example, if a market for capital is created, a rising share of investments will be made by market forces and a smaller share by central planners. As enterprise profitability becomes a more important criterion of a good manager, the nomenclature system for appointing them has to be modified, eventually perhaps eliminated.

A less obvious political consequence of market-oriented reforms is that conflicts between social groups emerge into the open, such as between buyers and sellers, creditors and borrowers, and at the micro-level are resolved increasingly by the market mechanism. At the macro-level, it generates the need for conflict-resolution mechanisms, as was indicated. Conflicting economic interests between groups exists in every society, but the party in traditional CPEs denies their existence, suppresses their open manifestations, resolves the conflicts behind the scenes, and hands down the decisions to those involved.

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[23] This is documented in [Marer, 1985].

In all modern societies three types of coordinating mechanisms are used: the market mechanism, the principle of command (for which in Western economies examples would be the monetary authority deciding to change the fixed exchange rate or the money supply), and the open political process, which involves negotiations between the representatives of interest groups over such issues as, for instance, the rate and incidence of taxes and subsidies or nationwide wage increases and working conditions by industry. A byproduct of the growing reliance on the market mechanism in a CPE is acknowledgement by the system's directors that economic—and therefore political—conflict does exist between groups and that a political mechanism must be found to resolve them.

C. Forces Promoting and Retarding the Reform Process

1. SUPPORT FOR THE REFORMS

The strongest force promoting further economic reforms is the persisting need to improve the economy, especially the CC export performance, and the convincing logic that improving the economic mechanism provides the only realistic chance to achieve it. The great majority of Hungary's economists are for it. Throughout the party and government establishment many important positions are occupied by pragmatists who understand the need for further reforms and therefore actively support it. To be sure, those who have the main responsibility to make concrete recommendations and to implement the approved measures are understandably more cautious than are the scholar-reformers. There is a realization that it is important to avoid major mistakes and there is a worry about side effects that may create a backlash that could be damaging to the reform process.

Hungary's past economic achievements, on balance, support the reform endeavor. To be sure, it is exceedingly difficult to ascertain precisely the impact of Hungary's reforms on economic performance because economic outcomes are determined jointly by a country's economic system, economic policies, and the external economic environment. The impact of the system alone cannot be assessed without holding constant the other variables, very difficult to do.

During 1970–83 Hungary's economic performance indicators—growth rates, productivity, standard of living, price stability, and the balance of payments—were not decisively better than those of the other CMEA countries taken as a group, suggesting that Hungary's performance was "just average" [Drechsler]. But several facts must be taken into accounting in interpreting the data. First, the documented availability and reliability of Hungary's economic statistics—especially the growth rates and price indices—are significantly better than for any other CMEA country, as was mentioned. Second, much of the contribution the reforms have made is manifest in such difficult-to-measure qualitative aspects as the improved matching of output with the needs of producers and consumers and in their better availability, quality, assortment, and service. If official East European data could be adjusted for differences in data reliability and output availability and quality, Hungary's performance would look significantly better in a regional perspective.

Especially notable are the achievements in agriculture. Reforms in agriculture began in 1957 with the abolition of compulsory deliveries, followed in the early 1960s by the use of only moderate force plus incentives for recollectivization, and continued since then by pioneering the introduction of numerous incentive mechanisms. These reforms have been more fundamental than in the economy's other sectors, partly because in agriculture it is easier to allow greater scope for prices, the market, and local decisions.

Reforms in agriculture have produced good results. In terms of per acre yields of major crops and per capita meat output, Hungary ranks among world leaders. The country is not only self sufficient in food but also generates large exports: about half of the grain crop is exported, as are significant quantities of animal products. Much remains to be done, however, to reduce excessive inputs per unit of output and to improve the rate of return on investment.

The significance of agriculture's good performance is that for some time the population has had an ample and improving supply of foodstuffs. More generally, the availability, assortment, and quality of consumer goods generally has improved, and prices rather than queues are used to ration the goods. People from Eastern Europe cross into Hungary by the millions each year and shop mainly for food. Foreigners visiting Hungary often note first and foremost that the country is relatively well supplied with consumer items, perhaps the principal reason why its reforms are considered successful.

In assessing the impact of reforms on performance, it should be noted, further, that during the last ten years Hungary had suffered a series of external shocks—deterioration in the terms of trade, export difficulties owing in part to slow Western growth and increased protectionism, and (since 1979) rising real interest rates on debt—whose cumulative impact was almost certainly greater than for any other CMEA country, largely because Hungary is the most heavily trade dependent country in the CMEA. To be sure, the impact of external shocks was greatly magnified by the mistakes in Hungary's economic policies and by the shortcomings of its economic system because these have slowed greatly the kinds of structural adjustments Hungary should have made in production and consumption in response to the dramatic shifts in its comparative advantage on the world market. But all in all, the impact of reforms on performance can be assessed as moderately positive, more so in agriculture than in the other sectors. Hungary still has very substantial "reserves" that could be mobilized by the consistent implementation of the kinds of further reforms that were enumerated, which is the strongest pressure to implement them.

2. OPPOSITION TO REFORMS

Domestic opposition to some of the existing but especially to major new reform initiatives comes from three main groups: those who are against them on ideological-political grounds, those who fear its adverse economic consequences, and those representing vested interests; membership is overlapping. External political forces may be opposed also.[24]

Ideological-Political Opposition.—Anti-reform positions are held by those who find that the ideas and practices of the reform are incompatible with what they believe to be several of the basic tenets of a socialist society: job security, relatively equal income distribution, stability of the price level, and central planning being superior to profits, risk-taking, and enterpreneurship. The strength of this opposition is a function of the balance of achievements and problems attributed (rightly or wrongly) to economic reforms. Some party members fear that further marketization would mean loss of party control and that liberalization in the economic sphere will lead to excessive liberalization in the political sphere also. Today, the provincial party apparatus tends to support the reform less enthusiastically than the central party apparatus. But because currently the reformers have the upper hand, political opposition is largely dormant.

Fear of Economic Consequences.—Unemployment, open inflation, and increased income inequality are the most feared adverse consequences of the reforms. Unemployment could occur if enterprises laid off workers in response to shifts from output to profit maximization. Controls on average wages and the soft budget constraint on enterprises are in part motivated by fear of unemloyment. At the same time, enlarging legal opportunities to enter the second economy is partly designed to create new employment opportunities.

Inflation is considered likely to become worse if prices were allowed to move more freely in response to market forces because Hungary still has shortages of many goods and services and sellers have monopoly power. It is important to recognize, however, that in recent years inflation was partly purposefully generated and partly allowed by the planners, as an instrument of austerity demand management and to reduce subsidies.

Perhaps the most serious concern at the moment is income distribution, both because the austerity program followed since 1979 froze, in some cases lowered, the real incomes of a large segment of the population, while the new round of reforms visibly swelled the incomes of a much smaller group. The combination of very large incomes for some, which often go into conspicuous consumption, and stagnating incomes for others, is potentially explosive. Although estimates published in Hungary suggest that as many as 75% of Hungarian families derive some income from second-economy activities, the popular support for this aspect of the reform is by no means universal. Most of those working in agriculture, and the young without apartments, cars, and durable goods are in favor of the second economy because opportunities there enhance their chances of obtaining such goods. Workers with skills readily mar-

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[24] Conceptualization in [Bornstein] was helpful in identifying the groups.

ketable in the second economy are also supportive. But most of the retired, the unskilled, and an increasingly large segment of the intellectuals, have misgivings. Especially significant is the large and growing number of persons who are below the poverty line, i.e., unable to maintain consumption levels considered decent by society's prevailing standards. Also important is what appears (from articles published in Hungary) to be the growing frustration of the intellectuals—scientists, educators, white-collar workers generally—about what they perceive to be the injustice of, say, a taxi driver (and others operating in the legal or semilegal private economy) being able to earn twice or three times the fixed income they are receiving. This dissatisfaction is dangerous to the reform movement because members of this group are the opinionmakers.

The longer austerity continues, the more difficulties it creates for further reforms. After six years of austerity (1979–84), during which average living standards stagnated at best and the level of gross investment declined each year, many would like to see economic growth resume. This is desired by the political leadership, the population, and especially the technical intelligentsia concerned about the growing technological gap. In Hungary, the pressure for growth is stronger than it would be in a market economy because there are few channels through which capital and labor may be redeployed from less to more productive uses. Therefore, everyone looks to the center to obtain new resources, generating pressures for a new investment drive. But the management of Hungary's large foreign debt requires that domestic absorption be held below production. Under the prevailing economic system, only the state budget can reduce purchasing power by taxing enterprises directly and consumers by holding down real incomes. The alternative of course would be to have better incentives for corporate and individual savings, but the monetary system is as yet insufficiently developed to achieve this. The need for continued austerity thus forces the authorities to maintain a tight control over wages and investments, limiting the speed with which decisions in such crucial areas can be delegated to producers.

Vested Interest.—This is represented by some members of the apparatus—in the party, the ministries (especially branch ministries), and other functionaries who lose power each time managers obtain more autonomy. Managers of large enterprises tend to be ambivalent about reforms, both fearing it and attaching hopes to it. Kornai explains:

> The majority of directors of large enterprises are ambivalent: resent the paternalistic center and would like real independence, including opportunities to independently export and import, to set prices and wages, etc. They get upset about the complexity and perpetual changes in the "regulators." But at the same time they note with satisfaction that the state responds to their pressure and in case of financial difficulties, helps them out, and would not like to lose the security that this provides [Kornai, 1983, pl 220].

The greatest irritant for them is the 1982 law giving preferential treatment to small establishments, not only because they can be pesky competitors but more because they have flexibility that the large firms don't, e.g., in such areas as compensating their employees. To be sure, it remains to be seen whether this resentment will be channeled into increased pressure to obtain more autonomy for large firms or to weaken the position of their competitors, as happended after 1972 [Kornai, pp. 220–21],

External Environment.—Hungary's reform process is to some degree a hostage to developments elsewhere because the CMEA trade and financial mechanism is essentially a reflection of the domestic economic mechanisms of its dominant members. As long as the other economies remain centrally planned, so that intrabloc trade flows continue to be centrally negotiated and bilaterally financed, Hungarian enterprises cannot be cut completely free from government tutelage as far as their trade with the CMEA countries is concerned, which is very important.

What about outside political pressures? Certainly, outside pressures to eliminate this or that undesirable consequence of the reforms, or to postpone a reform step, is always present and could intensify. But it seems unlikely that such pressure could effectively result in an across-the-board retrenchment in the economic mechanism. First, Hungary's political stability and economic achievements linked with the reform process basically justify it in the eyes of the leaders in most of the CMEA countries. Since there is not one country—certainly not the USSR—that can point to a clearly superior alternative to the Hungarian model, critics do not appear to have strong arguments to sway Hungarian decisionmaking.

What about economic or political pressure or the use of military force? As long as Hungarian reforms are proceeding peacefully and in a measured fashion, any objective cost-benefit analysis of military intervention to reverse it would suggest that it is less than a remote possibility. Too blatant a use of economic pressure is contrained also. For the USSR the most important limitation is that inflicting injuries would undermine the economic and therefore political stability of an ally; for the other countries, economic pressure would be a two-edged sword.

Certain considerations probably mitigate external opposition. All of Hungary's CMEA partners benefit from the reforms by being in a position to buy from Hungary needed agricultural and food products and by having nonreciprocal direct access to Hungarian enterprises to find needed supplies and to help assure the timely delivery of the right kind of products.

A further consideration is the possible utility of the Hungarian experiment for the USSR and other CPE countries. That Hungarian reforms have had an impact on China's economic reforms is certain; on certain measures the USSR has introduced in agriculture, probably. Oleg Bogomolov, Director of the Institute of Socialist Economies of the Soviet Academy of Sciences, expressed the following views in an interview (*La Republica* Italy, October 30–31, 1983, quoted in *Heti Világgazdaság,* November 12, 1983):

> Q. In several socialist countries, for example in Hungary, major reforms are implemented, opening the way for private initiatives, discovering the market and limiting state interference. What is the view on this in the Soviet Union?
>
> A. Soviet economists approve of these reforms, but that does not mean that they can also be employed in the Soviet Union, since they reflect particular situations and needs linked with the size of countries. To be sure, the western press is making a mistake in speaking only of the Hungarian model, which it contrast with the situation in the Soviet Union. At the same time, there are also reforms in Bulgaria and the GDR and certain reforms have been introduced in some Soviet republics also.

Q. How are the reforms assessed and how far can experimentation go in the CMEA countries?

A. Attached to GOSPLAN we have established an interagency organization, in whose work I participate, to research the new mechanisms and reforms, to advise concerning their practically, or simply to call attention to them . . . Our advice is taken into account, just as we also consider seriously everything that is happening in Hungary and in the other countries. . . For example, we have learned from the Hungarian experience in agriculture and gave greater freedom of decision to various units. . . . regulating them through indirect methods: prices, credits, and other monetary measures. . . . in industry, the experience of the GDR was of considerable help regarding the effective integration of planning, preparation, production, distribution, and technical service.

It would be naive to asssume, of course, that conservative leaders, such as those currently in power in the USSR, the GDR, and especially Czechoslovakia, have no misgivings and do not exert political pressure on Hungary against its reforms going "too far." But, according to a person well-placed to judge this, "Hungary's reform policies today are unquestionably meeting smaller resistance than after 1968" [Nyers, 1984, p. 16].

D. The Future of Economic Reform

Logic and evidence suggests that, barring some cataclysmic event like war, the essential features of the reforms already in place are quite deeply rooted. The shortcomings of the traditional CPE are well known and discredited in the eyes of the work force, the intellectuals, and a generation of students (who were educated on this matter partly to justify the reform process). The repeated public commitment of most political leaders to the reform process is a positive factor also. Therefore, the emergence of a spontaneous movement from below or from within the ranks of the party leadership, openly advocating moving back toward a traditional command economy is not likely. Furthermore, experience has also taught the leadership that any significant retrogressive tinkering with the mechanism already in place is likely to elicit adverse economic consequences swiftly, such as a decline of production in agriculture, and thus create political difficulties. To be sure, the likelihood that the economic reform process will become irreversible will be considerably stronger after the institutional reforms now planned are implemented.

Of course, any economic measure has undesirable consequences—one of the perennial dilemmas of economics—so that the statement that Hungary's basic reforms are not easily reversible does not mean that this or that reform measure may not be revoked or that periods of retrenchment could not again happen. But that the basic reform principles and institutions already in place would be given up appears to be most unlikely.

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APPENDIX. NEW FINANCIAL INTERMEDIARIES ESTABLISHED BETWEEN JANUARY 1980 AND DECEMBER 1983

Name and legal form of organization	Initial capital (mill. fts)	Founders and their share of initial capital (mill. fts)	Purpose and profile	Types of financial operations
1. Innovation Fund of the Central Exchange and Credit Bank (separate account).	600	HNB: 200; STDC: 200; ministries 200.	Financing the development or application of Hungarian innovations.	Financing technical development on venture capital basis (including fixed assets); participation in founding enterprises and associations implementing the innovations.
2. Enterprise Fund of the Hungarian Foreign Trade Bank (separate account).	175	Hungarian Foreign Trade Bank: 100/year; State budget: 75/yr.	Financing investments for the development of Western export of prime contractors; founding enterprises abroad and joint ventures in Hungary or abroad.	Loans for already operating businesses; capital-contribution to existing or planned associations; leasing; possibly bond issues.
3. Enterprise Fund of the HNB and the Central Exchange and Credit Bank (separate account).	500	HNB	Investment (i.e. financial intermediation, utilization of excess capacity), making use of development funds; dissemination of leasing; introduction of trade in financial instruments.	Permanent contribution to development funds; participation partnerships and associations; leasing; the issuing of bonds, possibly of other financial instruments.
4. Financial Association for Technical Development.	600	STDC: 50%; SDB: 50%	To speed innovation, especially by financing investments for technological development.	Loans; temporary or permanent allocations to development fund (with profit-sharing bond issues).
5. INTERINVEST Foreign Trade Development Mutual Fund.	1,823	44 FTEs and the Hungarian Foreign Trade Bank.	Financing investments to increase convertible commodities and import substitution; to develop external marketing organizations.	Loans; the financing of domestic and foreign ventures; leasing.
6. Fund for International Innovation [1] (temporary designation).	500 (in 3 yrs)	Ministry of Industry (from centralized technical development funds of enterprises).	Technical development; the dissemination of modern technology.	Loans (mostly to large organizations); venture capital (mostly to small business).
7. Industrial Cooperatives' Mutual Development Fund.	150; in 3 yrs a total of 300.	National Association of Industrial Cooperatives (common development fund): 50%; State Development Commission: 50%.	Improvement of goods and services to the population; export promotion; support of innovation; import substitution.	Loans; venture capital; bond issues; making use of development funds.

Investment guidelines	Who may become business partner?	Decision timeframe	Who is authorized to make decisions?
1. In the case of successful development, agreed sharing of profits for a definite or indefinite period. The time-limitation of investment has not yet been determined.	Anyone	10 days to 3 months	The director.
2. Interest rate corresponds to that charged on export-development loans (presently 14%) + possible interest rebate. Untaxed profits are shared by partners according to invested capital. Contribution to the dev. fund for 12 years.	Legal economic entities	Approximately 30 days	Management of the Hungarian Foriegn Trade Bank; under 20 million forints, the bank's supervising committee, chaired by the managing director.
3. Payment of agreed annuity or dividend (based on 1983 HNB presidential directive 8/1983, para. 11). Contribution to development fund for maximum of 10 years.	Legal economic entities	2 to 3 weeks	Top management of the HNB.
4. 14% interest on investment loans, 7% on technical development loans. dividends or annuity as agreed (see HNB directive cited above); placement usually for 3 to 4 years.	Legal economic entities, budgetary organizations.	1 to 1.5 months	Under 5 million, the director; over 5 million, the supervisory committee established by the board of directors.
5. In accordance with prevailing credit guidelines (presently 11%); usual placement for 3 to 5 years.	Legal economic entities	1 week to 60 days	Under 10 million, the director, on the advice of the investment committee, over 10 million, top management.
6. Interest rate is 4–8%; in case of joint risk-taking, profit-sharing as agreed. Usual capital placement for 1 to 5 yrs.	Anyone	Maximum 1 month	The director.
7. Interest rates vary, depending on purpose; agreed profit-sharing; usual placement for 1 to 5 yrs.	Industrial, construction and service cooperatives.	Not yet decided	Up to 5% of the basic capital, the director; above this, board of directors.

Name and legal form of organization	Initial capital (mill. fts)	Founders and their share of initial capital (mill. fts)	Purpose and profile	Types of financial operations
8. Agricultural Innovation Mutual Fund.	150; in 3 yrs a total of 500.	SDB, Ministry of Agriculture and Food, "TOT", "SzÖVOSz".	Support of innovation in agriculture, food production, and in their background industries and marketing networks; partial risks sharing of innovation.	Venture capital financing; temporary or permanent contributions to development funds (for new business); leasing; possibly bond issues.
9. Construction Innovation Fund (association).	300	Ministry of Construction: 50%; State Development Commission: 50%.	Financing developments in the construction- and building-material-industries.	Loans; permanent contributions to development funds; participation in joint ventures and partnership; bond issues.
10. Enterprise office of the National Savings Bank (separate account).	500 in 5 yrs + 25% of business deposits (=200 forints).	National Savings Bank	Businesslike financing of profit-oriented private ventures; collecting and placing the population's investment funds by issuing and placing financial instruments.	Temporary placement of funds; participation in new business ventures of various types through permanent placement of funds and bond issues.
11. Young Investors' Association [1] (ICWA).	10; today 50	SDB: 50%; Central Committee of Communist Youth League: 50%.	Financing of technical development and related business ventures; introduction of innovations; development of computer technology; formation of ICWAs.	Providing advances and reimbursement of costs to private individuals; transfer of development funds to legal entities; preferential capital placement to small enterprises; leasing.
12. NOVOTRADE, Inc.[2]	124.5	Central Exchange and Credit Bank; Fund for Innovation; SDB; National Savings Bank; Hungarian Foreign Trade Bank; and many enterprises (total: 121 shareholders).	Technical development (available only to purchase of patents, know-how or technology).	Temporary or permanent transfer of development funds; participation in ICWAs and partnerships; leasing.
13. NOVIKI Small Business Innovations Association.	120 to 150 planned annual turnover.	SDB, "KIOSz" (may also use outside funds, i.e. the development and innovation funds of firms, state budget subsidies).	Implementation and dissemination of inventions and technical innovations, primarily of small enterprises; financing investment for technical development; intermediating of technical development between producers.	Participation in partnerships and joint ventures; placement of risk capital; risk-sharing of investment in innovation funds; inter-enterprise transfer of innovation funds.

Investment guidelines	Who may become business partner?	Decision timeframe	Who is authorized to make decisions?
8. Profit-sharing as agreed. Depending on the type of business, placement for 1–8 years.	Anyone	2 days to 2 to 3 weeks	Up to 10 million, the director; over 10 million, the board of directors.
9. Investment at 14% interest; technical development at 7%. Payment of annuity or profit-sharing as agreed; placement usually for 5–7 years.	Legal economic entities	Up to 5 million, 30 days; 5 to 20 million, 45 days; over that, 60 days.	Up to 5 million, the director; 5–20 million, permanent deputies of the board of directors; above 20 million, the board of directors.
10. Minimum expected rate of return must be equal to interest-rate charged (14–15%); profit-sharing as agreed. Time-limit of placement has not yet been decided.	Small businesses; private individuals; joint ventures with participation by private individuals or ICWAs.	2 to 3 weeks	Up to specified amount, the investment committee; above that, top management of the National Savings Bank.
11. Risk capital. If invention is successful, capital contribution is repaid from profit, remaining profit is shared by contract. If unsuccessful, no repayment obligation. Placements average 18 to 20 months.	Anyone	45 to 60 days	After technical assessment and on the basis of rate of return guidelines, the director.
12. Annuities as agreed; profit-sharing in accordance with investment. Placements average 2 to 4 years.	Anyone	Within 15 days	Up to 10% of the basic capital, the director; over that, the membership at the annual meetings.
13. Fixed fees or agreed profit-sharing. Placements generally for less than 3 years.	Private artisans and merchants; ECWAs, ICWAs, private legal entities; cooperatives' special groups.	Approximately 2 weeks	Up to 20% of available capital, a management committee; above this (in rare instances), the board of directors.

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[1] Began operating in 1984.

[2] Organizations primarily for the management of innovation. They are listed because they provide risk capital which may not have to be repaid.

Source: Heti Világgazdaság, December 24, 1983.

HUNGARY'S BALANCE OF PAYMENTS CRISIS AND RESPONSE, 1978-84

By Paul Marer*

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I. INTRODUCTION

The 1968-84 period was aptly divided into three periods by one of Hungary's leading policymakers, János Fekete: the golden age (1968-73), the age of illusions (1974-78), and the age of realism (since 1979).

The introduction of the New Economic Mechanism (NEM) was followed by five *golden age* years: the economy was growing at a good tempo, there was no open unemployment or inflation, and the balance of payments (BOP) was in equilibrium. Although the NEM could not solve many of the economy's problems, it did release the creative energies of some individuals, cooperatives, and small firms. Agriculture especially flourished, and the increased production of goods and services in short supply helped to move the economy toward equilibrium. The favorable external environment contributed positively also.

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The *age of illusions* refers to the policymakers' response to the external shocks Hungary suffered after 1973: rising energy and raw material prices, large deterioration in the terms of trade, and increased difficulties of exporting to the recession-plagued countries of the industrial West. Policymakers believed that the shocks were temporary, that the economy could be insulated from them, that the best policy response was to accelerate the rate of economic growth, that investment and trade should be oriented away from the world market, toward cooperation with CMEA partners, and that the economic reform process should be halted, in some areas reversed.

But Hungary could not then, or now, be insulated from external economic shocks. Energy and raw materials dominate imports and their acquisition costs are tied, even if sourced in the CMEA, to prices on the world market. Also, Hungary must purchase a rising share of energy and raw material needs on the world market, for convertible currency (CC). The modern technology it needs is available largely in the West, again only for CC.

Accelerating the growth rate failed to consider that it will require an even more rapid increase in CC imports, especially since the growth spurt was investment led. The share of gross investment in GDP rose from 34% in 1970 to 41% in 1978. Major projects with long gestation periods were undertaken at pre-1974 factor and product prices, with much of the planned output intended for the CMEA market.

The most serious consequence of the "age of illusion" policies was the rapid growth of CC trade deficits, and the resulting increase in the level of the CC debt. As policymakers came gradually to realize that the economic trends were not sustainable much longer, their illusions were discarded and *policies of realism* introduced to gain control over the situation. But because the new policies were introduced too late and with insufficient vigor, and because of unforeseen adverse developments elsewhere in Eastern Europe and on the world market, Hungary got "caught" in a severe BOP crisis during 1981–83. This essay tries to tell the story of what happened and how Hungary responded.

II. Large Trade Deficits in the 1970's

Hungary ran large convertible currency (CC) trade deficits in the 1970s in all years except 1973. To show the extent to which deficits in CC trade made it possible for domestic absorption to exceed domestic production, Table 1 presents the annual CC trade balance and GDP in forints. It reveals that during the decade of the 1970s net resource inflows from the West enabled Hungary to spend, on the average, 2.2% more on consumption and investment than it produced. In 1978, with CC debt already at high levels, absorption made possible by a CC import surplus was nearly 5% greater than production. The import surplus was financed entirely by foreign borrowing; in fact, Hungary had to borrow more than just to cover the trade deficit to pay the interest on debt outstanding and the deficits on invisible transactions in its CC BOP (Appendix Table 1).

During the 1970s Hungary also ran a trade deficit in transferable rubles (TR). However, the cumulative total of this deficit (47.5 billion forints) was less than half of the deficit in CC trade ([Hungary], Table 4), and a good part of it could be financed by a surplus on invisible transactions (Table 2).

The import surpluses in CC and TR helped to support a good expansion of output as well as consumption and investment until 1979, as revealed by the official growth statistics and Western recomputations (see [Álton] in this volume).[1]

TABLE 1.—HUNGARY'S CONVERTIBLE CURRENCY TRADE BALANCE, 1971–79

[Billions of current forints]

Year	Trade balance	GDP	Trade balance as percent of GDP
1971	−13.1	360	−3.6
1972	−3.3	391	−0.8
1973	+5.3	429	+1.2
1974	−19.9	449	−4.4
1975	−12.8	481	−2.7
1976	−7.3	528	−1.4
1977	−14.7	581	−2.5
1978	−29.6	628	−4.7
1979	−5.9	681	−0.9
1971–79	−101.3	4,528	−2.2

Source: Trade balance: [Hungary], table 4; GDP: [Hungary], table 2.7.

TABLE 2.—HUNGARY: TRADE BALANCE VERSUS CURRENT ACCOUNT BALANCE IN TRADE SETTLED IN TRANSFERABLE RUBLES, 1977–81

[Millions of current dollars]

Year	Trade balance	Current account balance	Surplus on invisibles
1977	−1,882	−57	+202
1978	−405	−194	+211
1979	−394	−118	+276
1980	−418	−206	+212
1981	−406	−15	+391
1977–81	−1,882	−590	+1,292

Source: [Hungary], table 3.3.

External as well as internal causes contributed to the substantial trade deficits in CC. Deterioration in the terms of trade with both the CC and the TR area, supply limitations on the CMEA market which forced Hungary to increase essential imports from the West, and sluggish demand and increased protectionism in Western markets were the main external reasons. Another contribution in this volume has quantified the impact of these external forces on Hungary's CC trade and BOP [Balassa and Tyson]. The main domestic causes of the trade deficit were delaying much too long a policy of adjustment to the severe external shocks in the mistaken belief that somehow the economy could be insulated from their adverse consequences, and the shortcomings of the economic system enumerated in the preceding chapter.

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[1] So far it has not been possible to determine the precise reasons for the large difference between the official Hungarian and Western-computed growth rates. A comparison of the respective approaches concludes that differences in sectoral price weights do not explain the discrepancy, so that differences in computational procedures and/or in the size and composition of the samples on which the sectoral indices are based are the likely reasons [Hewett-1985].

III. DEBT MANAGEMENT THROUGH 1981

The persisting CC trade deficits increased the CC debt, which rose from about $1 billion in 1970 to $9.1 billion by 1980. By the late 1970s the debt burden reached uncomfortably high levels. For example, by then the debt service ratio (share of CC exports taken by the payment of interest on outstanding debt plus repayment of principal due) rose to nearly 30% and then jumped further to about 40% in 1981–82.

Simultaneously with the rising debt level, Hungary made two policy decisions concerning external finance that, with the benefit of hindsight, exacerbated its payments difficulties when the credit crunch came in the early 1980s. One was to rely almost exclusively on financial loans, mainly syndicated Eurocurrency credits, and practically not at all on inter-governmental loans (Appendix Table 2). In this respect Hungary stood apart from the other CMEA countries (and most LDCs), which owed anywhere from 11 to 95% of their 1980 debt to Western governments. But this policy contained a built-in vulnerability to a change in the attitude of private banks and to other changes in market conditions. For example, while the interest rate on government-to government loans is fixed for the duration of the loan, the interest on syndicated Eurocurrency credits is adjusted every few months to reflect prevailing market conditions. As it turned out, when interest rates skyrocketed after 1979, this hurt Hungary, as shown by changes in the average interest rate between 1977 and 1981 on the stock of debt outstanding [IMF, p. 58]:

	Percent
1977	4.9
1978	4.9
1979	5.9
1980	9.7
1981	14.0

To be sure, there was a rationale for the credit-sourcing decisions: the proceeds of syndicated Eurocurrency loans can be spent freely and the currency composition of the loans can be negotiated, giving the borrower flexibility, whereas loans from Western governments typically are tied to purchases from the creditor country and are denominated in its currency.

The other decision was to rely heavily on short-term loans (repayable within one year), a potentially volatile source of finance. During 1977–81 the following portions of Hungary's CC debt were short-term (Appendix Table 2): [2]

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[2] The percentage may overstate somewhat Hungary's dependence on short-term finance because they are year-end figures. It appears that at the end of each calendar year, Hungary builds up its reserves by attracting foreign deposits. Unless Hungary has unusually large financing needs at the beginning of each year, the purpose would appear to be financial window-dressing. In recent years the ratios of fourth-quarter foreign exchange holdings to the average foreign exchange reserves of the first three quarters were (Appendix Table 4): 1979, 1.27; 1980, 1.38; 1981, 1.03; 1982, 1.89; 1983, 1.91.

	Percent
1977	47
1978	45
1979	38
1980	37
1981	33

A consequence of having a large portion of debt in short-term maturities was that Hungary found itself unusually vulnerable when its access to external borrowing became severely restricted.

Sometime during 1977–1978 policymakers realized that unless the trend of running increasingly large trade deficits is reversed, the country would not be able to meet its payments obligations within a few years. For this reason, an adjustment program that gave a high (but not yet the highest) priority to improving the CC trade balance was adopted in 1978 and implemented as of 1979. The plan was approximately to maintain consumption for several years and to reduce domestic absorption by cutting investment. Since 1979 the annual economic plan has been constructed as follows: begin with an estimate of CC export. Taking into account the export revenue that must go to service the debt on a net basis (i.e., adjusted by the planned amount of new borrowing) yields the value of imports which, through the income elasticity of imports, determines the feasible level of national income. Total output is then allocated between consumption, net exports, and investments, the last item being determined largely as a residual because maintaining consumption and generating net exports became the highest priorities in 1979.

Based on what, in retrospect, turned out to be much too optimistic assumptions about the continued availability of external finance, the adjustment program envisioned that the level of CC debt would be stabilized by the mid-1980s, and would decline thereafter.

IV. The 1981–83 Balance of Payments Crisis

The external credit situation faced by Hungary and the other East European countries began to tighten in 1980 (in that year there was a small outflow of funds from Hungary on a net basis) after lenders realized that Poland and possibly some other countries in the region could not remain solvent. It worsened considerably after March 1981 when Poland declared a moratorium on debt payments and later that year when Romania also became insolvent. During 1981 Hungary lost short-term deposits which it was still able then to offset by borrowing longer term [Hungary, Table 8]. But the introduction of martial law in Poland in December 1981 and the economic sanctions imposed by the Reagan Administration on the USSR and Poland shattered almost completely the confidence of the Western financial community in the wisdom of continued lending to countries in this region. The lenders' confidence was already shaken by earlier political (Afghanistan) and financial (Polish and Romanian rescheduling) crises in East-West relations, the precarious external debt situations of Hungary, the GDR and Yugoslavia, as well as by the growing debt-servicing problems of other countries in other regions.

For Hungary, real financial crisis was triggered between January and March of 1982, when foreign exchange reserves dropped from $1,652 million to $461 million (Appendix table 4)—barely sufficient to cover one month's of imports—as Western, OPEC and (reportedly) Soviet-bloc banks also pulled out short-term deposits [Miller and Barclay], thus plunging Hungary into a liquidity crisis. Moreover, because Hungary had borrowed relatively large amounts for a decade and at the beginning of 1982 still did not have in place an adjustment program of sufficient bite to stabilize its debt situation within a time frame judged desirable by Western lenders under the changed international situation, some Western creditors were wondering whether Hungary should not be considered insolvent. To a considerable extent, of course, an affirmative judgment on this matter could have easily become self-fulfilling because it would have dried up not only new loans but also routine refinancing. Thus, during the first half of 1982, Hungary appeared to be on the brink of having to reschedule, just like Poland and Romania did already and Yugoslavia had to eventually.

V. WHY NOT RESCHEDULE?

Judging from their subsequent actions, Hungarian policymakers viewed the prospect of rescheduling as an unmitigated disaster that had to be avoided at almost any cost. One may speculate that rescheduling would have created three kinds of problems: shattering the favorable perceptions of foreigners about Hungary's economic management; imposing additional financial burdens; and, most importantly perhaps, the reform program would have lost political support domestically and also with Hungary's CMEA partners.

Since the mid-1960s Hungary has had an increasingly favorable image in the West as a politically liberal and economically successful communist country pursuing pragmatic reforms. The Western business and banking communities reacted favorably to the Hungarian course because they found it easier to engage in commercial relations with Hungary than with the other countries in the region; this, in turn, yielded concrete benefits for Hungary, such as easier access to large loans than if Hungary would have remained a traditional CPE. Western governments also endorsed Hungary's new course, partly for the same reasons as the business and banking communities, and partly out of appreciation that the Hungarian authorities were proceeding with economic reforms and were treating their own people decently—certainly so in comparison with several other countries in the region. Therefore, Western governments became more willing to grant what they viewed as economic "concessions" to Hungary. One example is Hungary being granted MFN status and access to Eximbank and CCC credits in 1978 in the U.S. Thus, on the economic side, Hungary's favorable image, carefully nurtured by the country's decisionmakers, would have been largely shattered by rescheduling because Hungary would have been lumped with Poland and Romania by Western observers.

The financial cost of postponing debt repayments would have been substantial because of steep rescheduling fees, a higher rate of interest on the outstanding debt, and a higher risk premium on future borrowing.

The political consequences of rescheduling might have been costly also. Domestically and in the other CMEA countries rescheduling would have been interpreted as evidence of the non-viability of the economic reforms and the policy of economic opening to the West. Many observers probably would not have understood that opening to the West was not a frivolous choice but an absolute necessity under any circumstances and that "bankruptcy" was not the consequence of opening per se, but that of a combination of excessive borrowing, poor choice and implementation of many of the large investment projects (see [Hewett-1981] and [Marer-1985a], and unforeseen adverse external circumstances. Furthermore, it would not have been fully understood that one of the reasons for the country's severe debt-servicing problem was not the fact that economic reforms were introduced, but that they were not pursued vigorously enough (for details, see the author's companion contribution on Hungary in this volume). Even some of those who might have perceived the facts correctly may have found it expedient to turn against economic and political reforms and continued opening to the West under the changed political circumstances. One reason why rescheduling probably would have had considerable adverse political consequences is that top officials of the Kádár regime had stated repeatedly and publicly the importance of Hungary living up to its external financial obligations.

Presumably for the reasons stated, the country's leadership persevered and has been able to avoid rescheduling by (1) joining the IMF and the World Bank, (2) introducing a more effective domestic adjustment program whose centerpiece is greater economic austerity; and (3) skillfully mobilizing the political and financial goodwill built up over the years with other nations. In the absence of any of the three legs of this tripod, almost certainly rescheduling could not have been avoided.

This conclusion is based on the data presented in the Appendix. Appendix Table 3 shows that in 1982 Hungary had to repay $2.8 billion in short-term credits borrowed in the previous year, $.9 billion in medium and long-term loans falling due that year, plus nearly $1 billion interest on the debt outstanding, so that its 1982 financing requirements totaled $4.7 billion. Financing can come from three sources: (1) running down reserves; (2) building an export surplus of goods and services; and (3) new foreign borrowings. Regarding reserves, at the end of 1981 gold and foreign exchange holdings stood at $2 billion. Since no country can run its reserves down to zero, let's assume that a maximum of $1.5 billion could have been used for that purpose, still leaving $3.2 billion to be financed. However, it would not have been possible to run a $3.2 billion trade surplus, amounting to well over 10% of GNP, because neither could the requisite supply be spared nor the CC markets found. Appendix Table 1 shows that after considerable belt-tightening, in 1982 Hungary was able to run a $800 million ($765 merchandise plus $39 million service) trade surplus, still leaving $2.4 billion to be financed by foreign borrowing. As long as a country remains creditworthy, it is able to rollover routinely much of its short-term and some if its medium- and long-term credits. But, as we have seen, this was not the case during the first half of that year. Hence the conclusion that without the emergency assistance of the BIS, ability to tap the IMF, and later also the World Bank, and the cooperation of governments, central banks, and a significant number of private lenders, Hungary would have had no choice but to reschedule. (A picturesque description of the "rescue" can be found in *Euromoney*, September 1982.)

Membership in the IMF and the World Bank has been helpful not only because of the money these organizations have made available but also because membership—and Hungary's evident cooperation with their programs—tipped the scale of some important government and private lenders in favor of making additional loans to Hungary at the time when they were badly needed and not routinely available to Eastern Europe. Very important in this respect is the economic adjustment program Hungary has been implementing since 1982—a more austere version of the 1979 program. In the short run, an IMF-approved adjustment program, if implemented approximately as agreed upon, helps a country in BOP difficulty by increasing the confidence of other lenders; in the longer run it enhances the likelihood that the country will be able to re-establish a sustainable BOP position. The political goodwill Hungary has been able to count on in the capitals of influential Western and Eastern nations has been very important also. For example, the Reagan Administration opposed neither Hungary's membership in the IMF and the World Bank nor the routine granting by these organizations of financial assistance to it on the same basis as to other nations, even though these matters were decided at the time the Administration was busy imposing sanctions on the Soviet Union and Poland. So far, Moscow has been helpful also, at least in the sense that it does not appear to have treated Hungary economically less favorably than it did East Europe as a group. For example, Moscow has not pulled the rug from under Hungary during this critical period by refusing to continue to pay for a significant portion of Hungary's exports to the USSR in CC.

VI. Membership in the IMF and Implications

Hungary formally applied for membership in the IMF and the World Bank in November 1981, just before the Polish events and just prior to the financial crisis triggered by the pullout of short-term credits during the first few months of 1982. Whether the propitious timing was foresight or just plain luck is difficult for an outsider to judge. It became a member of the IMF and the World Bank in May 1982; since then it has obtained considerable financial assistance from, or with the help of these institutions. Shortly after Hungary joined the IMF, it obtained temporary "bridging" (till the IMF could grant a loan) credits totaling $510 million from the Bank for International Settlements (BIS) [Hungary, p. 25]. The BIS granted the large emergency credit based on the assessment that Hungary's negotiations with the IMF on an adjustment program, and thus the granting of a substantial IMF loan, would succeed [Mentre, p. 19]. Since the BIS is the central bank of central banks, predominantly those of the industrial West, in the absence of political goodwill and IMF membership these crucially timed loans most probably would not have been granted.

In December 1982 the IMF approved a $600 million stand-by loan to Hungary—to be disbursed over a 13 month period, with repayment to begin in 1986—to support its economic stabilization program.[3] The reason for the loan and the content of the stabilization program were the following [IMF Press Release No. 82/62, reprinted in *IMF Survey*, December 13, 1982):

> Since 1978, the Hungarian authorities have endeavored to correct the external disequilibrium which developed in the changed world economic environment after 1973/74. These adjustment efforts met with some success in 1979 and 1980, and it appeared that the economy was moving toward equilibrium. Exports in convertible currencies increased by an average of 24 percent a year in this period, the growth rate of imports in convertible currencies slowed, and the deficit on the current account balance of payments narrowed considerably.
>
> However, Hungary experienced a recurrence of balance of payments difficulties when, in 1981 and early 1982, a large outflow of short-term capital caused reserves to decline. The unfavorable trends which developed in the international capital markets at this time found Hungary the more vulnerable due to its heavy foreign debt burden. In response to these developments, the authorities have strengthened their adjustment efforts during the course of 1982 to curb the growth of enterprises' investible resources and their access to bank credit. Interest rates on loans to enterprises were raised, and additional taxes levied on most new investment projects, other than those related to convertible currency exports and savings of energy and raw materials. These actions were supplemented by cuts in budget allocations for state-controlled investment and measures to slow down stockbuilding. Efforts have also been undertaken to restrain consumption by tightening wage policy, raising taxes, and reducing subsidies on consumer goods.
>
> The Government's economic policies for the period of the program are geared to the improvement of the external liquidity position, with the goal of achieving a sizable current account surplus in convertible currencies in 1983. This strengthening of the external position, which should permit some rebuilding of reserves and a reduction in foreign debt, will be brought about through a reduction in domestic demand, achieved by tight controls on real incomes, enterprise investment, and the State budget, and through the stimulation of exports. A more active exchange rate policy is designed to make a contribution by raising the profitability of foreign sales. The economic reform process is being strengthened by measures to improve the structure and efficiency of industry and to sharpen export incentives.

Upon the completion of the first program, in January 1984, Hungary obtained a second stand-by loan of $440 million (SDR 425 million) to support the government's further economic and financial program, as stated by the IMF (Press Release No. 84/3, reprinted in *IMF Survey*, January 23, 1984):

> Over the past several years, Hungarian economic policy has been designed to correct substantial imbalances in the country's external position. A stabilization program, adopted in 1982 and supported by the use of Fund resources, aimed at producing a significant surplus in the current account balance in convertible currencies. Although considerable progress was made toward achieving the current account target, the 1983 outcome fell short of expectations, largely as the result of a greater-than-expected deterioration in the terms of trade and the impact of drought on agricultural exports. Nevertheless, the estimated US $300 million surplus of 1983 brings the cumulative improvement in Hungary's current balance in convertible currencies since 1981 to more than US $1.1 billion, or 5 percent of gross domestic product.
>
> The Government's economic and financial program for 1984, which the current stand-by arrangement supports, seeks to consolidate this improvement and to strengthen the external position further through demand management policies, complemented by a number of structural reform measures. The position of the state budget will be improved further, wage and pricing policy will be adjusted, incentives to save increased, and credit policy tightened. In addition, structural measures will

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[3] SDR 547 million, equal to 126.7% of its initial quota of SDR 375 million. Subsequent general quota enlargement increased Hungary's quota to SDR 530 million.

be implemented that aim to maximize output on the basis of available resources in the short run and at increasing the efficiency of production and the allocation of resources in the medium term.

Thus, during its first two years of membership, Hungary has obtained approximately $1 billion in loans from the IMF, which it used largely to repay the BIS and for debt service payments to other lenders.

The principal aim of the IMF in this case, as in others, is to provide medium-term financing to a country in serious BOP difficulty, contingent upon the borrowing country's willingness to implement a jointly-agreed domestic adjustment program. The program is designed to reestablish a sustainable BOP situation, that is, a current account position commensurate with the amount of external finance to which Hungary can expect to have access to on a regular basis, without straining its debt-service capacity. The data in Appendix Table 3 shows that in 1983, and again in 1984, Hungary needed approximately a $1 billion trade surplus (about 40 billion forints), more than 5% of the GDP (Table 1), which explains why the domestic adjustment program had to involve considerable belt-tightening.

The IMF cannot "impose" an adjustment program on a country; it can only work with the authorities if they themselves conclude that the cost of re-establishing creditworthiness is lower than rejecting the Fund's advice and thus increasing the possibility that a forced adjustment would be triggered by a substantial reduction or cutoff of external finance. Since in Hungary's case the basic objectives of the authorities and the IMF—namely, to avoid rescheduling and re-establishing creditworthiness within a short period—coincided, the relationship has been basically harmonious from the outset. This does not, of course, exclude the possibility of differences in views about the technical details of how agreed objectives can best be accomplished. But since the relationship is basically cooperative rather than confrontational, compromises on the technical details can usually be reached rather routinely.

VII. Membership in the World Bank and Implications

Whether a country is able to obtain development finance from the World Bank depends on whether it is considered a less developed country (LDC), decided largely by its level of per capita GNP in dollars. In the case of market-type economies (MTEs), the World Bank relies on each country's own GNP computations in national currency units (NCUs), converted to dollars by the country's prevailing exchange rate. However, because CPEs compute net material product (NMP) not GNP and their exchange rates are not market determined, the World Bank must first determine GNP in NCUs and then find a NCU/$ convertor comparable to the exchange rates of market-type economies (MTEs), i.e., one that would insert the CPEs plausibly into the world's family of nations in terms of the volume of goods and services produced on a per capita basis.

Until Hungary joined the World Bank, the calculation of per capita dollar GNP had operational significance only for two CPEs, Romania (a member since 1972) and China (a member since 1980).

In both cases the Bank concluded that their per capita incomes were below the threshold levels ($2,650 in 1980) so that both qualified for World Bank assistance as LDCs.

Nevertheless, the Bank was also computing and reporting the dollar GNPs and growth rates of non-member CPEs in such authoritative publications as the World Bank *Atlas* and *World Development Report,* for the sake of comprehensive coverage.

In 1981 the Bank commissioned a group of independent experts to study the problem of GNP estimation, dollar conversion, and growth rate computation for CPEs and if possible to recommend a feasible and uniform method of estimating these data for CPEs; I had the principal responsibility for implementing this project. Our group found that conceptual problems and lack of data for many CPEs made estimation very problematic (for further details, see [Marer-1985b], in this volume, for full details [Marer-1985c]). Be that as it may, we devised a method of computation that could be applied uniformly for most CPEs, yielding apparently plausible results. In the case of Hungary, our method of estimating its per capita dollar GNP resulted in a number significantly higher ($4,400) than the threshold level below which a country would be eligible for World Bank loans. By contrast, Hungary's official exchange rate yielded per capita dollar GNP of around $2,000, making the country eligible for World Bank assistance [Hewett-1985]. (GNP in NCUs was not an issue for Hungary because it is the only CPE that computes and publishes reliably documented GDP figures.) When Hungary joined the Bank, the issue of how to compute per capita dollar GNP assumed operational significance. The Bank, and others (such as the U.S. Government, wishing to take a position on this issue) were confronted with the following difficult problems. First, have Hungary's market-oriented economic reforms gone far enough to give the country's prevailing dollar exchange rate a meaningful economic role, somewhat comparable to the role exchange rates play in the less developed MTEs? If so, a strong case could be made for accepting its official exchange rates for operational purposes. Second, even if one were to find that Hungary's official exchange rate yields an implausibly low dollar per capita GNP, given the fact that similar outcomes have been documented for a score of less developed MTEs that are World Bank members and qualify for loans, would a rejection of Hungary's official exchange rate for operational purposes discriminate against that country? These are very difficult questions to resolve. Even after all the available facts are marshalled and objectively assessed, the evidence leaves room for argumentation and alternative interpretations, so that the decision cannot be made purely scientifically, ultimately it calls for judgment which may include noneconomic considerations.

Fortunately for Hungary, the Bank decided to accept its official exchange rate, making it eligible for participation in the Bank's loan programs.

World Bank membership benefits Hungary in a variety of ways: (1) the loans obtained provided external finance at the time when the country's access to foreign capital was severely curtailed; (2) the Bank's loans are long-term, with grace periods of several years, important because Hungary urgently needed to lengthen the maturity composition of its loan portfolio; (3) the Bank, too, has been instrumental in helping Hungary obtain additional private finance, partly through the previously noted "confidence factor" that membership in international financial organizations provides to government and private lenders, and partly through the Bank's pioneering initiative to help raise funds for Hungary directly in the private sector; (4) membership makes Hungarian suppliers eligible to participate in bidding to help implement World Bank-financed projects in any country; and (5) may make use of the Bank's expert advice on economic matters, including its careful assessments of proposed development projects.

Some of the benefits Hungary has obtained up to now can be stated in concrete terms.

In July 1983, within approximately one year after it became a member; Hungary was granted its first, $249.4 million loan, disbursed over several years, to expand grain storage capacity in the country, to improve the mechanization of agriculture, and to support investments in energy production and conservation [*Heti Világgazdaság,* October 1, 1983]. Much of this investment is designed to help alleviate the problem of insufficient grain storage capacity, estimated to cause losses of up to 20% of the harvest in some years [*Hungary,* p. xxiii].

In September 1983 Hungary became the first member country to benefit from an innovative new approach to development lending—the so-called cofinancing arrangement. The sum of $270 million was obtained to provide additional finance for the same projects mentioned above, in two separate syndicated loan transactions, with the joint participation of commercial banks ($230 million) and the World Bank ($39 million).[4] The direct participation of the Bank enhances the guarantee for the commercial banks that the loan will be serviced on time because IMF and World Bank loans—including syndicated loans in which the latter institution participates—cannot be rescheduled without the debtor country losing all further access to loans from these international institutions. This is another example where the significance of loans granted by the international financial institutions goes considerably beyond the dollar amounts of their participations.

In 1984, the World Bank granted two further loans to Hungary, totaling $200 million, and helped arrange a further $480 million in co-financing from commercial banks for the approved projects in energy (development, production and conservation) and various other projects to increase CC exports. In co-financed projects the World Bank covers the CC import cost of the investment, while commercial bank loans finance a portion of their domestic costs [*Heti Világgazdaság,* October 6, 1984].

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[4] One syndicated confinancing totals $200 million. The syndication was led by the Arab Banking Corp., London, co-managed by three Japanese banks (Long Term Credit Bank of Japan, the Industrial Bank of Japan, and the Tokai Bank), another Arab bank (the Bahrain Middle East Bank), and a Swedish (Svenska Handelsbanken), Dutch (Algemene Bank Nederland), and a Canadian (The Bank of Nova Scotia) bank; altogether 33 financial institutions put up money; the World Bank participates with $30 million [*The Wall Street Journal,* September 16, 1983 and *Heti Világgazdaság,* October 1, 1983]. Separately, the Long Term Credit Bank of Japan has taken the lead in arranging a $69.3 million syndicated loan, denominate in yen; the World Bank participates in this syndication with $9.3 million [*The Wall Street Journal,* September 16, 1983].

In sum, during 1983–84 the Bank approved loans totaling about $450 million and helped arrange co-financing in excess of $700 million, in effect making a contribution of about $1.2 billion, to be disbursed over a period of years.

According to published statements, the Bank estimates that the investments financed by the loans mentioned will make possible $400 million of additional annual exports or import savings in a few years. [*Heti Világgazdaság,* October 1, 1983].

Hungary will likely benefit, further, from the Bank's recently instituted structural adjustment lending program. Its objective is to provide support for member countries in serious BOP difficulties, typically facing the prospect in the years ahead of troublesome deficits arising from a combination of external and domestic circumstances that are not likely to be easily or quickly reversed. To qualify for such lending, a country must make appropriate changes in its policies to enable its economy to adapt over a reasonable period to changes in the international environment without sacrificing its long-term growth objectives. Adjustment means reducing its current account deficit to a level commensurate with a sustainable BOP position (defined earlier) and undertaking a structural adjustment program of several years' duration. Such a program typically entails taking steps to improve agricultural and industrial efficiency, to promote the expansion and diversification of exports on the basis of comparative advantage, to develop domestic energy resources more vigorously and to improve the efficiency of their use, to raise the rate of domestic savings, to alter the composition of the public investment program to give more emphasis to quick-yielding investments and the more effective use of existing capacity, to change agricultural pricing to stimulate domestic production, to create special incentives or remove existing disincentives necessary to stimulate exports, and to strengthen the management of enterprises to reduce inefficiency and waste. The proceeds of the loans for structural adjustment are used to pay for general imports.

In 1985, three additional projects were expected to be approved for Bank financing of about $200 million, to be supported by a projected $400 million in co-financing, as part of the Bank's structural adjustment lending program. The projects being considered are in the chemical industry, principally to support the development of pesticides and pharmaceuticals and, possibly, a polyurethene complex; to support the expansion of livestock, primarily the modernization of beef-cattle, pork, and sheep production and processing (the projection is that after the current slump of meat prices on the world market, meat prices and demand will increase); and projects in the transportation infrastructure, namely, the construction of a modern beltway around Budapest, the modernization of the rail system, and an estimated $40 million for the acquisition of modern truck transport equipment to help increase export capacity (interview with Ian Hume of the World Bank in *Heti Világgazdaság,* February 2, 1985).

Thus, while the IMF provides financial support for BOP adjustment, the Bank focuses on the long-term development of the economy. The IMF pays particular attention to monetary and fiscal policies, foreign borrowing, and exchange rate management. The

Bank's main focus is the borrower's development priorities, the size and composition of its investment program, and the efficiency of resource use. The IMF is guided by the Bank on development issues; the Bank is guided by the IMF on BOP adjustment.

Membership in and good working relationship with the World Bank and the IMF have contributed to Hungary being the first East European country to be able to re-enter, with great difficulty to be sure, the Eurocurrency markets after martial law was imposed in Poland. In August 1982 it obtained a $260 million, three-year syndicated loan, managed by Manufacturers Hanover Trust [*Euromoney,* September 1982]. Reportedly, the intervention of the French government and the Bank of England were instrumental in getting French and British banks to join the syndication [*The Wall Street Journal,* August 6, 1982]. Since 1983, however, Hungary has been able to secure from commercial banks the amount of new medium and long term finance it periodically needs, in addition to loans from other sources, to stabilize (approximately) its total CC debt outstanding. (See Appendix table 3 for details of annual financing requirements.)

VIII. THE STABLIZATION PROGRAM AND ITS CONSEQUENCES

Program Logic and Main Instruments.—In 1978 Hungary adopted and in 1979 it began to implement a stablization program designed to curb its growing trade deficits, which swelled so rapidly through 1978 that, if unchecked, the foreign borrowing required would eventually have become impossible to finance. Improving the trade balance requires a reduction in the level of domestic absorption such that, after taking into account the amounts that must be allocated to service the foreign debt on a net basis (that is, interest payments net of interest received, plus debt amortization, less new loan disbursements), the balance on the current account achieves sustainable levels.

Any significant improvement in the trade balance within a relatively short period requires a program to curb domestic absorption (the term means total expenditure or aggregate demand in the economy). Checking absorption reduces import demand and releases additional resources for export. Although sustainable increases in exports are preferable to strong curbs on imports, in Hungary (as in many other countries), export expansion is limited by the unavailability of the right kinds of export supply and marketing know-how, and the inability or unwillingness of many trade partners to rapidly increase purchases from it.

Improving economic efficiency also helps the trade balance and should thus be an integral part of a stabilization program. However, a country in serious debt-servicing difficulties usually can't rely only on supply side measures, which typically improve the trade balance only gradually. The package of economic reforms Hungary has introduced since 1979 constitutes its supply side measures.

Total absorption is curbed by constraining the level of consumption, or investment, or both. In Hungary, as elsewhere in Eastern Europe, investment declined much more than consumption, for reasons of social policy, but also because increases in investment require especially large increases in CC imports. Hungary's level of investment was reduced directly through cutbacks in state investments financed directly by the budget, and indirectly, by cutting the value and increasing the costs of investment credits, imposing a 25% surcharge on investments not geared to improve the CC trade balance, and by confiscating or freezing a significant portion of enterprises' "own" funds available for investment.

Consumption was curtailed primarily by controlling nominal as well as real wages and income. Hungary has a system of regulation that effectively limits the total wage bill of most firms and farms. Since some rise in money wages must be allowed to provide incentives, real wages can be reduced (and relative price adjusted) by permitting a certain rate of inflation. Since in Hungary some prices are determined freely by market forces, the authorities can achieve the desired rate of inflation by manipulating administered prices and the exchange rate. That is, by controlling total money wages plus transfer payments and the consumer price level, the authorities effectively regulate the real purchasing power of the population.

Implementation.—The impact of the stabilization program is reflected first and foremost in the sharp reduction in investment. The level of gross domestic investment (GDI), comprised of gross fixed investment plus changes in stocks, was reduced each year between 1978 and 1984, so that in 1984 it stood at more than 30% below the 1978 level (Table 3). Fixed investment in the socialist sector (covering state investments and those of enterprises and cooperative, and representing about 85 percent of the economy's total investment in fixed capital) declined about 20%, while private sector investment (which consists largely of housing and represents about 15 percent of the total) has been increasing. The main reason for the discrepant growth rates is that the state has shifted a significant part of the construction of dwellings from the less efficient socialist to the more efficient private sector.

The decline in investment must be placed in perspective. GDI as percent of GDP declined from 41% in 1978 to 25% in 1984. But the calculation of these ratios is based on Hungarian prices which are relatively high for investment goods. When Hungary's 1975 GDP was evaluated by the UN- and World Bank-sponsored International Comparisons Project (ICP) at international prices, capital formation as percent of GDP was found to be lower by about 17% [Kravis, Table 1-6]. Assuming that the relationship found for 1975 remains valid, the peak in 1978 was not 41% but 34%—still high by the standards of other countries—and the trough in 1984 was not 25% but 21%, which still does not appear to be exceedingly low in comparison with other countries. In 1980 the average GDI/GDP ratio for middle-income countries worldwide was 25%, for industrial market economics, 23% [World, Appendix Table 5]. Thus, notwithstanding the sharp absolute decline in investments, Hungary's fundamental problem appears to be not the mobilization of savings but the efficiency of their use. This of course leads back to the issues connected with economic policy and the efficiency of the economic mechanism. (Hungary's 1968–84 investment policies and efficiency are discussed in considerable detail in [Marer–1985a].

TABLE 3.—HUNGARY: INDEX OF GROSS INVESTMENT IN REAL TERMS, 1978–84

[1978=100]

	Gross fixed investment			Total gross domestic investment [1]
	Socialist sector	Private sector	Total	
1978	100.0	100.0	100.0	100.0
1979	101.1	100.0	101.0	83.3
1980	94.4	102.0	95.2	80.4
1981	88.4	106.2	90.3	78.7
1982	85.6	110.7	88.3	76.0
1983	81.4	123.2	85.9	70.4
1984 [p]	80.6	NA	85.0	68.5

[1] Total investment plus changes in stocks.

[p] Preliminary.

Source: *Statisztikai Évkönyv* 1983, pp. 62, *IC* and Wharton CPE Current Analysis, March 13, 1985.

The growth of consumption was also restrained, but by less than that of investment. Based on official statistics (considered to be much more reliable than those of the other East European countries), between 1978 and 1984 the average real wage of workers and employees declined by about 7 percent because inflation increased faster than the rise in nominal salaries and wages (Table 4). The decline in the average real wage suggests that the standard of living of certain groups, especially in white collar occupations, may have declined rather substantially. This is one reason why Hungarian economists and sociologists are increasingly concerned about poverty in the country. If poverty is defined as comprising those individuals or families who do not possess sufficient resources to consume at a minimum level considered by society customary or acceptable, then 10 to 30 percent of the population, depending on definition and measurement, belong in this group [*Valóság*, January 1985]. To be sure, the average real income and real consumption of the population has increased somewhat during 1978–84 (Table 4) because transfer payments (such as social security), public consumption in kind (which includes, for example, defense spending), and income from private activities all increased more rapidly than salaries and wages. But because the real incomes of many have declined or stagnated, the resentment against those earning substantial amounts from private activities (whose legal scope has expanded since 1979), and are thus able to consume conspicuously, has been increasing. This resentment represents a rather potent "antireform" force today.

TABLE 4.—HUNGARY: INDEX OF PER CAPITA REAL INCOME AND CONSUMPTION, 1978–84

[1978=100]

	Wage earners and employees			Total population	
	Nominal earnings	Consumer price index	Real earnings	Real income	Real consumption
1978	100.0	100.0	100.0	100.0	100.0
1979	107.0	111.8	98.4	100.0	102.0
1980	115.1	118.9	96.8	100.3	102.6
1981	121.8	124.2	98.0	103.3	105.2
1982	129.2	132.6	97.2	104.2	106.5

TABLE 4.—HUNGARY: INDEX OF PER CAPITA REAL INCOME AND CONSUMPTION, 1978–84—Continued

[1978 = 100]

	Wage earners and employees			Total population	
	Nominal earnings	Consumer price index	Real earnings	Real income	Real consumption
1983	134.3	142.3	94.0	105.4	107.2
1984	146.2	154.1	94.9	106.2	108.3

Source: *Statisztikai Évkönyv* 1985, p. 17.

The net impact of the policies restraining investment and consumption, together with other measures to constrain imports and expand exports, improved the CC trade balance (in millions of current dollars) as follows [*Heti Világgazdaság,* February 9, 1985]: [5]

1978	−1,110
1979	−280
1980	−15
1981	+42
1982	+517
1983	+659
1984	+721

The improvement in the trade balance is the joint outcome of changes in the terms of trade and the rate of growth of the volume of exports and imports.

The terms of trade in CC transactions deteriorated somewhat, in transferable ruble trade, substantially (Table 5). A decline in the terms of trade with the CMEA worsens the BOP in CC because the larger volume of exports needed to pay for a given volume of imports requires additional CC purchases.

TABLE 5.—HUNGARY: TERMS OF TRADE, SOCIALIST VS. NONSOCIALIST, 1978–84

[1978 = 100]

	Socialist	Nonsocialist
1978	100.0	100.0
1979	98.8	98.2
1980	100.4	97.2
1981	102.6	93.4
1982	101.5	90.4
1983	99.0	88.1
1984	96.5	86.3

Source: *Külkereskedelmi Statisztikai Évkönyv,* 1983, p. 398 and Wharton CPE Current Analysis, March 13, 1985.

Hungarians now realize that developments in the terms of trade, especially the price of exports on CC markets, is in large measure a reflection of the country's own economic performance. Focusing on developments in 1984, it is noted that:

> . . . the price level of Hungary's exports declined considerably, in part reflecting world market price developments, in part the weaknesses of Hungary's export structure. Although the volume of exports increased, many items on demand on the

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[5] The figures shown here do not agree with those recorded in Appendix Table 1, until 1983 largely because here they are shown on payment basis, that is, including transport and related revenues and costs in CC. In 1984 an additional large discrepancy arises, reportedly because of "the skillful manipulation of receivables and payables, i.e., accelerated collection of export earnings and/or delayed payment of import bills [Wharton CPE Current Analysis, March 13, 1985].

world market were not available in Hungary for export. Problems concerning the quality of export products continued, and the cyclicality of foreign trade deliveries did not improve: once again, nearly 17 percent of the annual trade turnover took place in December [*Heti Világgazadság*, February 9, 1985].

The annual rate of growth of the volume of CC exports and imports developed as shown in Table 6.

TABLE 6.—HUNGARY: GROWTH OF THE VOLUME OF TRADE WITH THE WEST, 1979–84

[Percent]

	Exports			Imports		
	Ind. West	LDC's	Total	Ind. West	LDC's	Total
1978	2.3	6.4	3.0	18.5	5.7	15.8
1979	17.8	16.4	17.4	−10.0	−4.3	−9.1
1980	3.8	5.1	3.9	.4	9.6	1.7
1981	−8.0	21.9	−1.7	5.1	−4.4	3.3
1982	7.9	18.9	11.1	−7.0	39.6	0
1983	20.3	5.1	15.8	−2.4	32.2	5.1
1984			5.0			

Source: *Külkereskedelmi Statisztikai Evkönyv*, 1983, pp. 14–15 and *Heti Világgazdaság*, February 9, 1985.

It is to be noted that the true 1982–83 trade performance is obscured by the sharp increase in imports of Iranian and Libyan oil for re-export [Wharton CPE Current Analysis, May 11, 1981], probably because the oil could be obtained on credit or paid for with exports. These transactions explain the large jump in imports from LDCs in 1982 and 1983, and the corresponding large increases in CC exports.

The improvement in the CC trade balance was achieved by cutting imports and expanding exports. In addition to the macroeconomic measures taken to reduce absorption, a series of direct steps were also introduced to improve the trade balance.

In September 1982, the CC imports of specified primary products were made subject to temporary quantitative restrictions and a 20% surcharge was levied on the import of parts and components. Both restrictions were removed on July 1, 1984 but enterprises continue to find it more difficult to secure import licenses than in earlier years.

The centerpiece of the export drive has been the large export promotion credit program of the Hungarian National Bank, operating on a significant scale since 1976. In recent years the program has earmar~~ked the equiva~~lent of $200 to $300 million annually, a portion of it in CC, for enterprise-initiated projects that pledge that much of the resulting increase in capacity will be used to expand CC exports, and have a payback period of not more than four years. The Hungarian National Bank claims that nearly 20% of the country's CC exports, or about $1 billion annually, have been generated by these loans [*Heti Világgazdaság*, February 16, 1985]. (The amount is probably an overstatement because the estimate is based in part on enterprise statements on how much less they would be exporting if the loans would not have been granted. Given that funds for investments have been scarce since 1979, many enterprises probably tailor their requests for investment credits to the guidelines of the institution that has a monopoly of granting them.) Until January 1, 1984 exporters were also granted a rebate of up 45% of the interest paid on the loans. This was replaced by a tax rebate scheme, providing an approximately equivalent subsidy.

Various other mechanisms, such as the granting of managerial bonuses and certain wage preferences to firms that increase CC exports, have also been used to promote exports.

What is the significance of exchange rates for improving the trade balance? During 1982–84 the forint was depreciated substantially in real terms (that is, more than compensating for differences between domestic and external rates of inflation) vis-a-vis CCs. It is not known, however, to what extent was this done to generate the desired rate of inflation to control absorption, to comply with the recommendations of the IMF, or because it was expected to improve the trade balance.

Whether exchange rate depreciation improves significantly the CC trade balance is an open question. (Depreciating the forint vis-a-vis the transferable ruble of course would not be expected to increase exports to the CMEA, which are based on interstate agreements.) The introduction of the new price system in 1980, linking foreign and domestic prices, gave exchange rates a more important role than before (see the preceding essay for details). Nevertheless, I concur with the views of those Hungarian experts who hold that real exchange rate depreciation is not likely to improve significantly the CC trade balance because of the way Hungary's price system functions [e.g., Csikós-Nagy, pp. 90–94].

In a market economy, a real depreciation of the exchange rate is expected to improve the trade balance mainly because it increases the relative prices of tradeables vs. the nontradeables in domestic currency. The price elasticities of exports and imports then determine the improvement in the trade balance. In Hungary, a real depreciation of the exchange rate will improve the profitability of CC exports but will not change significantly the relative prices and profitability of tradeables as compared with those of goods sold domestically or to CMEA partners. This is because price changes on the domestic and profitability on both markets are tied directly to those achieved on CC exports by the pricing rules (see preceding chapter). To be sure, if competition or austerity prevent an exporter from increasing prices on the domestic market as much as the pricing rules allow, then a depreciation may prompt a shift to CC exports. Moreover, if domestic profitability were significant lower than CC export profitability this should provide an incentive for import substitution.

A further reason depreciation may not improve the trade balance significantly is its impact on costs. Since 1980, the domestic prices of energy, raw materials, and many semimanufacturers are based directly on current world market prices of these goods, irrespective of sourcing. Therefore, depreciation increases, practically instantaneously, the forint cost of these inputs. And since outside industry's "competitive" sectors, cost-plus pricing generally still prevails, depreciation will not alter significantly the relative prices of tradeables and nontradeables.

The foregoing discussion leads to the conclusion that, under the economic mechanism that was in place in Hungary through 1984, depreciation probably could not be relied on as a key instrument to improve the trade balance. However, the more the mechanism evolves toward a genuine market economy, the greater will be the response of producers to price and profit signals and the more the exchange rate mechanism will function along traditional lines.

Impact of Austerity on Growth.—Reduced absorption and constraints on the supply side both contributed to a reduction in the rate of growth of output. The main constraint on the supply side has been the insufficient level of CC exports, which has constrained CC imports. Diminished ability to import basic inputs and spare parts for equipment affects production adversely, which explains at least in part the differences between pre- and post-1978 rates of economic growth. The rate of growth of GDP produced were [*Statisztikai Evkönyv*, 1983, p. 62 and Wharton CPE Current Analysis, March 13, 1985]:

	Percent
1970–78	6.0
1979	1.5
1980	.1
1981	2.9
1982	2.8
1983	.7
1984	2.9

IX. OUTLOOK

During 1982–84, Hungary gradually reestablished its international creditworthiness and was able to reduce somewhat its gross as well as net CC debt from their 1980–81 peak levels (Appendix Table 2).[6] But its total external debt is still high; according to the President of the Hungarian National Bank, Mátyás Timár, because interest payments continue to impose a heavy burden [*Heti Világgazdaság*, February 16, 1985], even though the net interest burden declined from its almost $1 billion peak in 1982 to about half that amount by 1985 (Appendix Table 3), largely because world interest rates have eased.

At the beginning of 1985, Hungary's strategy was to continue, gradually, to reduce its external debt. That strategy is compatible with some new borrowing for investment purposes, mainly to improve the balance of payments. The intention, however, is, that the amount of net new borrowing should remain below the amortization of the old debt, thus reducing the total debt outstanding. During 1985, Hungary plans no new borrowing, for example, from the IMF [*Heti Világgazdaság*, February 16, 1985].

The implication of this policy is continued austerity approximately until the end of the decade. This is because a reduction of the level of debt and interest payments will require Hungary to generate a trade surplus of between $0.5 and $1 billion annually, depending upon world interest rates and other factors [Crane, Appendix C]. The degree of austerity implied by the projected level of export surplus will depend on how much the debt is to be reduced in any given period, the terms of trade, whether developments in relations with the CMEA will compound or ease Hungary's economic burden, and the improvements in efficiency generated by the new economic policy and reform measures.

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[6] No great significance should be attached to relatively small fluctuations in debt levels because those may be caused by the changing valuation of the currencies in which the debt is denominated.

For a small, resource-poor country, heavily dependent on imports, the single most telling measure of economic efficiency is ability to earn CC. Hungary needs large export revenues to service its debt, to be able to import energy and raw materials it needs over and above the amounts available from CMEA sources, and to acquire modern technology from Western suppliers. In recent years only about 20% of CC export revenues could be spent to purchase new technology. For all these reasons, CC export performance is the key to the country's long-term economic performance.

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APPENDIX. DERIVATION OF HUNGARY'S CONVERTIBLE CURRENCY BALANCE OF PAYMENTS, DEBT, AND FLOW OF FUNDS ACCOUNTS

The appendix presents four tabulations and documents the derivation of their entries: Hungary's balance of payments for 1977-1984 (Appendix Table 1); external debt outstanding during 1977-1984 (Appendix Table 2); external financing requirements and sources of funds for 1982-1984 (Appendix Table 3) and quarterly foreign exchange reserves during 1979-1983 (Appendix Table 4). An attempt was made to rely as much as possible on data published by the IMF and the World Bank, which in turn are based on official Hungarian sources, and then to fill in the missing numbers and projections from Western sources. Attention was paid to internal consistency between the tabulations. The data were obtained or derived in the following sequence:

Current Account (Appendix Table 1).—1977-81 data are given in [Hungary], Table 3.2; 1982-83 actual exports, imports and current account balance from [IFS], April 1985; travel from [Heti Világgazdaság], February 4, 1984; freight and insurance from [Külkereskedelmi Statisztikai Évkönyv], 1983, p. 13; interest from [CIA]; balance of other current account items as residual. 1984 data were obtained or estimated: trade and balance on current account from Wharton CPE Current Analysis, March 13, 1985; freight and insurance from [*Heti Világgazdaság*] February 9, 1985; travel is estimated; "other" is residual.

Stock of External Debt (Appendix Table 2).—Gross debt, total, by original maturity: [Wharton], March 1984; by type: BIS, IMF, World Bank: same as above; inter-governmental: assumed to remain unchanged; financial and trade-related: estimated, based on the presumed impact of the 1982-83 credit crunch, forcing CPEs to rely increasingly on suppliers' credits; international reserves: [IFS], March 1984 and April 1985 (it should be noted that the official Hungarian definition of reserves also includes some short-term assets [IMF-1982], Table 47); net debt: gross debt less reserves.

Financing Requirements and Sources of Funds (Appendix Table 3).—The 1982-84 data are obtained from the balance of payments tabulation (Appendix Table 1) and [CIA]; the entries for 1985-88 are projections: repayment of medium- and long-term commercial debt and loans from international institutions on the basis of the maturity schedules of the loans outstanding as of 12/31/83; short-term commercial credits on the basis of the presumed continuing need to finance some convertible-currency exports, especially to LDCs, with the net amounts declining because of repayments. The projections for 1985-88 are based on [Wharton], March 1984.

Quarterly Foreign Exchange Reserves (Appendix Table 4).—These are published in the monthly issues of [IFS]; the amounts shown in the various issues for the same period may change presumably because of changing currency values.

APPENDIX TABLE 1.—HUNGARY: CURRENT ACCOUNT IN CONVERTIBLE CURRENCY, 1977–84

[Millions of current dollars]

Item	1977	1978	1979	1980	1981	1982	1983 [1]	1984 [2]
Exports (f.o.b.) [1]	2,661	3,178	4,063	4,863	4,879	4,876	4,848	4,894
Imports (f.o.b.) [1]	3,020	3,959	4,230	4,587	4,435	4,111	3,970	4,294
Trade balance [1]	−361	−781	−167	−276	444	765	878	600
Freight and insurance (net)	−148	−180	−187	−237	−216	−217	−158	−144
Travel (net)	40	34	72	83	133	153	165	200
Interest (net)	−164	−252	−366	−409	−1,103	−976	−600	−575
Government expenditure (net)	−27	−33	−36	−43	−47	[3] 197	[3] 15	[3] 360
Other current items (net)	−118	−56	−181	−87	−140			
Unrequited transfers (net)	21	25	40	46	46			
Current account	−756	−1,243	−824	−371	−882	−78	300	331

[1] Customs basis; the date shown in the text is on payments basis, that is, including transport and other costs and revenue in CC. See also note 5 in text.

[2] Projected.

[3] Balancing item.

Note: Subtotals and totals may not be fully accurate because of rounding.

Source: 1977–81: [Hungary], table 3.2; 1982–84: [Miller and Barclay], table 8; [IFS], April 1985; Wharton CPE Current Analysis, May 11, 1984 and March 13, 1985; [Crane].

APPENDIX TABLE 2.—HUNGARY: EXTERNAL DEBT IN CONVERTIBLE CURRENCY, 1977–84

[Millions of current dollars]

	1977	1978	1979	1980	1981	1982	1983	1984
Total (gross) yearend	5,227	7,586	8,300	9,090	8,700	7,715	8,250	8,900
By original maturity:								
Short term	2,436	3,423	3,172	3,347	2,848	1,764	2,123	...
Long term	2,791	4,163	5,128	5,743	5,849	5,951	6,127	...
By type:								
Financial loans [1]	4,953	7,262	7,915	8,617	8,051	[3] (6,500)	...	...
Trade related [2]	266	319	384	468	643	[3] (674)	...	...
Intergovernmental	8	5	1	6	6	[3] (6)	...	...
BIS						300	...	...
IMF						215	547	972
World Bank							11	150
International reserves	1,726	2,136	2,230	2,558	2,033	1,300	1,910	2,575
Gold:								
Millions fine troy oz [4]	1,282	1,978	1,777	2,069	1,685	646	1,532	2,063
At national valuation [5]	70	249	402	468	381	146	346	466
Foreign exchange	1,656	1,887	1,828	2,090	1,652	1,151	1,517	1,477
SDR's						3	46	...
IMF reserve position							41	...
Net debt [6]	3,501	5,450	6,070	6,532	6,667	6,415	5,963	6,325

[1] Syndicated loans, bonds and notes, bank to bank credit and deposits and balances of nonresident banks.

[2] Suppliers' credit, bankers' acceptances, downpayments for Hungarian exports and import documents in the process of settlement.

[3] Estimated.

[4] It is to be noted that gold holdings reported in [IFS], March 1984 is significantly less for all years than gold holdings reported, say, in [IFS], July 1982.

[5] At $42.22/oz prior to 1978, $126 in 1978 and $226 thereafter ([IMF–1982], Table 47).

[6] Gross debt less international reserves. The latter includes export credits extended.

Source: [Hungary], table 4.4; [IFS], April, 1985, Wharton CPE Current Analysis, May 11, 1984 and March 13, 1985.

APPENDIX TABLE 3.—HUNGARY: EXTERNAL CONVERTIBLE CURRENCY FINANCING REQUIREMENTS AND SOURCES OF FINANCE, 1982–88

[Millions of current dollars]

	1982	1983	1984 [1]	1985 [2]	1986 [2]	1987 [2]	1988 [2]
Financing requirements:							
Current account balance	−78	300	331				
Trade balance	765	878	600				
Other invisibles (net)	133	22	306	0	0	0	0
Interest (net)	−976	−600	−575	−490	−400	−358	−337
Debt repayments:							
Medium: and long-term Commercial [3]	−882	−936	−1,500	−1,795	−1,520	−1,265	−1,230
Short-term commercial	−2,848	[4] −1,640	−1,500	−1,750	−1,850	−2,050	−2,350
International institutions					−139	−181	−277
BIS							
Export credits extended	−195	−195	−125	−100	−75	−50	−25
Total financing requirements	−4,003	−2,471	−2,794				
Sources of finance:							
Medium- and long-term commercial credits	1,105	861	1,000				
Short-term commercial credits	1,535	1,500	1,750				
BIS	300						
IMF	215	332	425				
World Bank		11	139				
Changes in reserves (decreast = +)	733	−651	−665				
Valuation adjustment and reconciliation	115	418	145				
Total finance	4,003	2,471	2,794				

[1] Partly estimated.

[2] Forcast except the repayments of medium- and long-term loans which are estimated.

[3] Includes supplier and other credits.

[4] No explanation is given why repayment amount does not match short-term borrowing in previous year. One possibility is that a portion of the BIS loan is due and is included here.

Source: 1982–83: [CIA], table 8; 1984–88: [Wharton], March 1984, except for items that could be obtained from Appendix Tables 1 and 2.

APPENDIX TABLE 4.—HUNGARY: QUARTERLY FOREIGN EXCHANGE RESERVES, 1979–84

Year	I	II	III	IV
1979	1,265	1,523	1,329	1,747
1980	1,556	1,655	1,341	2,090
1981	1,726	1,637	1,453	1,652
1982	461	716	653	1,151
1983	680	893	805	1,477
1984	1,017	1,229	1,810	2,109

Source: 1979: [IFS], July 1982; 1980–83: [IFS], March 1984; 1984: [IFS], April 1985.

HUNGARIAN AGRICULTURE: MOVING IN THE RIGHT DIRECTION

By Michael Marrese[1]

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SUMMARY

Hungarian agriculture is moving in the right direction because growth trends in profit, value added, the net agricultural trade balance, and non-basic agricultural activities are encouraging. The response of large-scale farms to the reduction in state subsidies and the general tightening of investment funds has been impressive—construction of cheaper, more quickly completed buildings, growth of non-basic activities, greater reliance on TOPS enterprises, and a more aggressive attitude toward creating joint ventures. In addition, as long as Hungarians are willing to accept substantial differences in officially measurable take-home pay, the reform of income

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During the fall of 1983, I spent three months in Hungary studying agriculture and conducting interviews at eight agricultural cooperatives, one state farm, one meat processing plant, and two headquarters of technically operated production systems. In addition, I met with experts from the Research Institute for Agricultural Economics, Karl Marx Economics University, the Ministry of Agriculture and Food Industry, and other policy-oriented organizations. While I am deeply indebted to many people, I particularly wish to thank, Csaba Csáki, Yoo Soo Hong, Mrs. János Juhasz, Gyula Varga, Rezsö Kostyál, Enrique Ordaz, Mrs. Béla Palovics, and Zoltán Zoltan for enormous assistance. Any remaining errors, of course, are my responsibility. I also wish to express my appreciation to IREX, for financial support during my research stay.

regulation has great potential. Finally, the simplification of the price-tax-subsidy system is progressing to a point at which policy tradeoffs are measured more easily.

I. INTRODUCTION

Hungarian agriculture is noted for enterprise independence, effort-promoting incentives, and centrally-directed coordination via planned financial regulation. The development of these characteristics since the later 1970's is examined by reviewing Hungarian agricultural performance in section II and policy in section III. Comments on future developments end the paper.

Widespread interest in Hungarian agriculture stems from three factors. First, Hungarian agriculture has succeeded in providing an abundant amount and variety of food for the Hungarian people, in earning hard currency, and in creating effective interaction between large-scale farms[2] and small-scale producers.[3] In addition, Hungary's relatively high standard of living and rural vitality are due in large part to agricultural performance. Csáki (1983), Csizmadia (1981), Fekete and Sebestyen (1981), Kostyal (1983), Marrese (1983), Szabó (1983), and Ujhelyi (1983) discuss these issues in detail.

Second, agriculture's progressive achievements have often been extended to other sectors. For instance, well before the 1968 introduction of the New Economic Mechanism agricultural policy had been based predominantly on financial regulation rather than quantity regulation. Also the legal and socially useful cooperation between the socialist and private interest within agriculture inspired the recent extension of private-sector opportunities to the rest of the economy.

Third, Hungarian agriculture has evolved from a Soviet-type institutional structure, therefore has attracted international attention. Whether the lessons of Hungarian agriculture are easily transferable to other countries is an open issue, yet the steps that Hungary has already taken are relatively clear and summarized below [see Csáki (1983) and Marrese (1983) for more details].

During most of 1949–56, forced collectivization and inadequate investment characterized Hungarian agriculture. Reacting to the failure of these policies and general social unrest, Hungary during 1958–61 implemented voluntary, incentive-induced collectivization and contractual procurement of agricultural commodities rather than compulsory delivery. Simultaneously mechanization and fertilizer usage increased, partly due to the greater investment priority given to agriculture. Continued development of large-scale farming was of primary importance until 1965.

From 1965 to 1967, agriculture underwent its first wave of decentralization: obligatory plan targets were abandoned; farms were permitted to determine much of their own production plans and were given some scope in financing expansion; the regulatory environment of agricultural cooperatives became similar to that of state farms; and private-plot production was encouraged for the first time. The period 1968–71 included the second wave of decentralization and a jump in agriculture's share of total fixed capital investment from 16–17% to 21–23%. Members of cooperatives received greater control over input, output, and distribution decisions, while planning based on indirect financial regulation via prices, subsidies, and credit was established.

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[2] Large-scale farms refer to state farms, all forms of agricultural cooperatives, and agricultural combinates.

[3] Small-scale producers generally have sources of income other than that derived from their private agricultural production. They may be employed on large-scale farms and cultivate household plots on the side, or have a non-agricultural job yet also run an auxiliary farm.

With the initiation of a decentralized economic environment designed to stimulate agricultural productivity, the next step was to introduce up-to-date technology. Starting in 1970, technically operated production systems (TOPS) were developed by a number of large-scale farms, initially and most successfully for crop farming and later for horticulture and animal farming. Each TOPS headquarters is: (1) a self-financing franchiser that competitively sells detailed input-output programs and consulting services to large-scale farms that have complete freedom in deciding which, if any, TOPS to utilize for a particular product; (2) a channel for the transfer of international agribusiness techniques into Hungary; and (3) a substitute for the marketing services of Western agricultural suppliers and a complement to the information and research services of Hungary's Ministry of Agriculture and Food Products.[4]

The 1970s also witnessed the transformation of small-scale farming from self-sufficiency farming to commodity production. The share of small-scale farming in agricultural gross output grew from 8.4% in 1970 to 9.6% in 1980, while small-scale agriculture's share of agricultural's total fixed capital stock dropped from 14.4% to 11.2%.[5] Given that 70% of this output growth occurred on auxiliary farms,[6] it is probable that an increase in the labor services of auxiliary farmers (whose primary jobs are not in agriculture) was a major reason for the expansion. Crucial to this increased labor effort were improved material incentives and permanent availability of inputs for small scale farming.

II. PERFORMANCE

The efficiency of Hungarian agriculture relative to either foreign agriculture or Hungarian industry is difficult to gauge because (1) almost every country's agricultural sector, including Hungary's, is subject to widespread, idiosyncratic and complex taxation and subsidization, (2) Hungarian agricultural producer prices differ from any relevant set of trade prices, and (3) Hungarian regulation of agriculture differs from that of industry. More concretely, Tables 1–4 do not provide a complete efficiency picture, yet they contain important observations about post-1975 agricultural activity.

Starting on the input side, the first three lines of Table 1 indicate that cultivated area, labor, and investment for agriculture, the food processing industry and forestry have remained relatively constant during 1976–82. Lines 4 and 5 show that these three sectors' relative shares of machinery and construction investment have been relatively stable, a sign of unchanged sectoral status. Lines 6–

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[4] Ujhelyi (1983) emphasizes (1), Winpenny (1981) stresses (2), and Csaba Cáski expressed a sentiment similar to (3) in private conversation.

[5] SE 1982, pp. 149–50.

[6] Ujhelyi (1983), p. 19.

11 refer to subsidization of agriculture. Investment subsidies grew from 1976 to 1979, then began to decline steadily through 1983 [the 1983 estimate is 2,600 million forints (FT)]. Thus from 1980 onward, large-scale farms contributed a much greater percentage of their own funds to investment projects.[7] In contrast, current product subsidies increased every year between 1976 and 1983 (the 1983 estimate is 16,754 million FT), offsetting the movements in investment subsidies in such a manner that subsidies as a whole remained almost constant in current prices, thus declining in real terms. Line 12 documents flat per hectare fertilizer usage since 1976. However total material inputs increased in real terms, as seen in the three middle columns of Table 2. Between 1975 and 1982, expenses in constant 1976 prices for crops and horticultural output grew by 24.8%, for meat and animal products by 27.7%, and for all agricultural output by 26.6%. Here expense items include material costs, intermediate consumption of nonmaterial services, depreciation, charges for land usage, turnover and production taxes, construction and services taxes, entertainment expenses, fines and legal penalties. Prices supplements and other direct subsidies reduce the amount of expenses incurred.

On the output side, the last two rows of Table 1 document the start of a positive upward trend in profit per 100 FT of fixed assets, evaluated at current prices. This trend is much stronger for agricultural cooperatives than for state farms, possibly because state farms have a greater concentration of animal husbandry than agricultural cooperatives. In any case, this observation adds to other evidence cited in Marrese (1983) tentatively indicating that the performance of agricultural cooperatives may be superior to that of state farms.

Unfortunately, these profit indicators are not pure efficiency indicators partly because profit includes all direct current production subsidies and is net of rent and all taxes. The subtraction of net subsidies (current production subsidies minus taxes, in current prices) from profit yields an adjusted profit figure. For agricultural cooperatives, the trend in adjusted profit is more positive than the trend found in Table 1 because net subsidies for agricultural cooperatives averaged 12,317 million FT during 1976–80, but fell to 10,615 million FT in 1981 and to 8,872 million FT in 1982.[8] Thus the profit trend for agricultural cooperatives is truly encouraging.

TABLE 1.—TRENDS IN AGRICULTURE, FOOD PROCESSING, AND FORESTRY

	Average for 1976–80	1981	1982
1. Cultivated area, 1,000 hectares	8,336	8,285	8,274
2. Number of active earners, 1,000's	1,237.3	1,228.1	1,247.2
3. Investment volume, 1975 = 100.0	103.4	105.6	104.5
4. Share of total machinery investment, percent	24.3	24.5	21.7
5. Share of total construction investment, percent	14.5	15.7	14.9
6. State investment subsidies (as percent of total agricultural investment)	32.5	19.7	NA
7. Own investment sources (as percent of total agricultural investment)	49.7	60.7	NA
8. Bank loans for investment (as percent of total agricultural investment)	17.2	19.6	NA

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[7] See Table 1; Kostyál (1983), p. 82; Szabó (1983), p. 48.

[8] Kostyál (1983), pp. 82–86 and update information supplied by him.

TABLE 1.—TRENDS IN AGRICULTURE, FOOD PROCESSING, AND FORESTRY—Continued

	Average for 1976–80	1981	1982
9. Current production (subsidies [1] in million of FT, current prices)	13,285	15,203	15,951
10. Investment (subsidies [1] in million of FT, current prices)	5,857	4,019	3,822
11. Total (subsidies [1] in million of FT, current prices)	19,142	19,221	19,773
12. Fertilizer usage, kg. per hectare	219	225	227
13. Agricultural cooperatives (profit [2] per 100 FT of fixed assets, current prices)	8.4	8.9	10.4
14. State farms (profit [2] per 100 FT of fixed assets, current prices)	6.6	6.4	7.1

[1] Exclusive of consumer subsidies. Current production subsidies include indirect subsidies of fertilizer, plant protecting agents, and weedkillers, direct subsidization of meat and milk production, and support of farms with poor land quality via price supplements and tax advantages.

[2] Profit includes all subsidies and excludes all taxes, therefore is not a totally accurate measure of efficiency. It is based on both basic and nonbasic agricultural activity.

Sources: Agricultural and Food Industry 1982, pp. 7, 9, 14, 31, 33; SE 1982, p. 74; Szabó (1983), p. 48; Kostyál (1983), p. 82; information from the Hungarian Ministry of Finance.

In Table 2, figures for 1982 relative to the annual average of 1970–72 indicate that growth rates for crop output, animal product output, and the sum of those outputs were much higher than the corresponding value-added figures. Thus the difference between output and valued-added, material expenses plus depreciation, grew more quickly than output. Even though material expenses plus depreciation rose more rapidly for crops than for animal products, the impact on animal product value-added was larger because expenses were approximately 70–80% of the gross value of animal product output yet only 40–50% of the gross value of crop output. Hence, value-added growth in crops has been more impressive than value-added growth in animal products. However value-added growth in animal products has been improving—1981 and 1982 figures are better than those for 1976–80, and 1976–80 figures are better than those for 1970–75.

TABLE 2.—ANNUAL PRODUCTION INDEXES BASED ON 1976 PRICES

[Average of 1970–72=100.0]

Year	Value of output			Expenses including depreciation			Value added [1]		
	Crops [2]	Animal products	Total [3]	Crops [2]	Animal products	Total [3]	Crops [2]	Animal products	Total [3]
1973	115.2	105.6	110.7	123.7	108.4	113.9	110.2	98.0	106.8
1974	115.8	112.5	114.2	122.7	120.9	121.6	111.4	88.1	105.2
1975	121.2	115.3	118.4	136.0	123.5	128.2	112.2	92.1	106.7
1976	112.6	118.4	115.3	139.3	124.8	130.2	96.0	100.4	97.2
1977	126.1	128.3	127.2	148.6	135.5	140.3	112.2	108.3	111.1
1978	127.4	132.1	129.6	157.6	140.5	146.9	108.8	108.6	108.7
1979	123.4	133.8	128.2	158.7	142.4	148.5	101.3	109.7	103.6
1980	131.9	135.7	133.7	161.9	148.1	153.2	113.4	101.4	110.1
1981 [4]	131.3	135.5	135.1	171.3	149.1	157.2	106.8	112.5	108.4
1982 [5]	143.6	146.8	145.0	169.7	157.7	162.3	127.5	116.2	124.2

[1] Includes all direct subsidies, but excludes rent and taxes; thus differs from U.S. conception of value added.

[2] Includes horticultural output.

[3] Not equal to total basic agricultural output because of exclusion of services and forestry products.

[4] Based on data in MA V, p. 11 rather than SE 1982, p. 151.

[5] Rough estimates using chain indices to transform figures in 1981 prices into figures into 1976 prices. Based on SE 1982, p. 151, yet corrected by MA V, p. 11 for changes starting in 1981.

Sources: SE 1982, p. 151; MA V, pp. 10–11; MSE 1982, p. 101.

Problems in animal husbandry have stemmed primarily from inappropriately designed investment subsidies. For instance, during the early 1970s the state offered to pay large-scale farms 70% of the construction costs of structures for dairy-cattle, beef-cattle, and pigs. Four harmful consequences followed. First, completion of these structures took longer than anticipated because more farms chose to participate than originally estimated, causing above-plan construction activity and investment bottlenecks in rural areas. Second, some participating farms undertook animal husbandry investments for which they did not have access to the technical expertise and working capital needed to guarantee their long-term operation. Third, other farms had the "technical base" for the operation of animal husbandry facilities, but could not produce animal products profitably. In short, investment subsidies encouraged too many poorly-suited farms to build facilities given a widespread belief in the following rule-of-thumb: "Even if today's production cost indicates that an activity will be unprofitable, as long as the investment for that activity is heavily subsidized, it makes sense to undertake it. For one thing, tomorrow's prices and costs are uncertain. For another, once the state subsidizes the construction of a facility, it is more likely to subsidize its utilization rather than to let it remain unutilized." Fourth, more expensive structures tended to be built by those farms that employed their own construction workers because the construction activity itself was profitable (especially given the 70% subsidy).[9]

TABLE 3.—TRENDS IN FOOD EXPORTS AND IMPORTS

	Range for 1976–80	1981	1982
	In percentage terms		
I. Relative importance of trade in food:			
Food exports ÷ total exports	21–23	25.2	24.9
Food dollar exports ÷ total dollar exports	27–31	33.0	35.1
Food imports ÷ total imports	8–11	9.1	7.0
Food dollar imports ÷ total dollar imports	13–19	13.6	10.4
	Millions of FT, current prices		
II. Value of the balance of trade in food:			
Food export — food imports	[1] 29,363.2	46,977.7	57,919.0
Food dollar exports — food dollar imports	[1] 15,409.5	32,155.1	41,553.1
	Millions of dollars current prices[2]		
Food dollar exports — food dollar imports	[1] 423.4	976.0	1,102.0

[1] Average for 1976–80.
[2] Dollar figures are based on implicit annual average exchange rates calculated form KSE 1982, p. 12.

Sources: KSE 1976, pp. 29–31, 35–37, 40–42; KSE 1980, pp. 34–43; KSE 1982, pp. 12, 25–26, 28–33.

Consideration of foreign trade constraints puts these pessimistic remarks about animal husbandry into some perspective. From Table 3 we see that during 1976–80, agricultural products accounted for 21–23% of total exports and 27–31% of total dollar exports. In 1981 and 1982, agriculture's export share rose to 25.2% and 24.9% respectively, and agriculture's dollar export share to 33.0%

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[9] See Lakatos (1983) for a micro examination of the construction of specialized animal husbandry facilities.

and 35.1% respectively. Simultaneously, agriculture's import share and dollar import share fell in 1981 and again in 1982 relative to the range for 1976–80. On balance, food exports minus food imports in current prices averaged about 29 billion FT during 1976–80, then rose to 47 billion FT in 1981 and 58 billion FT in 1982. The figures for the dollar food trade balance show an average of 15 billion FT in 1976–80, 32 billion FT for 1981, and 42 billion FT in 1982. In dollar terms, the dollar food trade balance was an average of $423 million for 1976–80, $976 million for 1981, and $1,102 million for 1982.

Thus far Table 3 has established that agriculture is a large source of foreign exchange. To understand how agriculture's role as a source of foreign exchange is related to animal husbandry's poor performance, consider the following example. During the last few years, the cost (including labor) of one dollar of foreign exchange from the export of grain was approximately 35 FT, while the cost of one dollar of foreign exchange from meat exports was approximately 42–60 FT. From a trade point of view, it seems that grain is more profitable and Hungarians should increase grain exports and decrease meat exports. However, Hungarians counter with the following argument. One ton of meat exports earns more than the feed-equivalent of grain exports. For instance, 4 kg. of grain is needed to produce 1 kg. of pork, yet the world market price (wmp) of pork is more than 4 times the wmp of grain. Thus if one considers only the opportunity costs of domestic feed and imported feed protein, then meat exports are more profitable than grain exports. Implicity domestic labor and capital costs are set equal to zero. This assumption is realistic in the sense that (1) widespread rural unemployment would exist for several years if Hungary suddenly replaced feed grain production with food grain production and reduced its animal husbandry, and (2) capital costs are sunk. The bottom line is that Hungary's progress in animal husbandry looks better when its contribution to foreign trade (not analyzed here) is taken into account and domestic labor and capital costs are ignored. However this is a strong signal that gross investment in the less profitable sectors of animal husbandry should be curtailed greatly and some feed grain production should be replaced with food grain production.

Table 3 is somewhat deceptive because the 1981 and 1982 dollar trade figures reflect Hungary's increased success in exporting agricultural goods to the Soviet Union for dollars rather than Hungary's heightened ability to penetrate Western markets. My 1981 and 1982 lower bound estimates for Hungarian dollar exports to the Soviet Union are $745.1 million and $719.2 million respectively. These figures represent 44.3% and 46.0% of total 1981 and 1982 Hungarian dollar exports respectively. Note that Hungary's dollar trade balance, including transportation cost, for 1981 was $42.2 million and for 1982 was $516.8 million.[10] Thus these dollar trade

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[10] The 1982 lower bound estimate was calculated as follows. Total Hungarian ruble agricultural exports equal 21,748.1 million FT (KSE 1982, p. 32). Hungarian agricultural exports to Bulgaria, Czechoslovakia, East Germany, Poland, and Romania are assumed to be exclusively ruble exports, and for 1982 equal 12,000.9 million FT (KSE 1982, pp. 267, 273, 306, 312, 332). The difference, 9,745.2 million FT, is assumed to be Hungarian ruble exports to the Soviet Union. Total

Continued

flows with the Soviet Union were crucial to Hungary's dollar trade surplus.

Hungary's agricultural dollar door to the Soviet Union stems from a ten-year contract that began in 1976. Hungary agreed to export for dollars above-quota amounts of wheat and meat to the Soviet Union at prevailing wmp's, while the Soviet Union agreed to export for dollars above-quota amounts of oil to Hungary at prevailing wmp's. The original expectation was that this above-quota trade flow would be approximately balanced. However in 1981 and 1982, Hungary did not import above-quota oil, yet exported large amounts of above-quota wheat and meat. Currently both sides are negotiating a new contract to start in 1986. The closing of Hungary's agricultural dollar door to the Soviet Union would be a tremendous blow to agriculture's capacity to earn dollars.

Table 4 documents the growth in value-added for agriculture's various production activities. Between 1970 and 1982, the value-added from basic agricultural activity (crops, horticultural output, live animals, animal products, and agricultural and forestry services and by-products) grew 31.9%; growth between 1975 and 1982 being 16.9%. The corresponding figures for non-basic agricultural activity (industrial, construction, trade, and other non-agricultural activity conducted on large-scale farms) are 120.4% and 54.7% respectively. During 1981 and 1982, non-basic agricultural activity's share of total agricultural value-added stood at approximately 20%, a sharp jump from the 12% of the early 1970s. Two trends underlie these statistics: the share of non-basic agricultural output in total agricultural output has been growing, and non-basic activity has been the more profitable branch.

Soviet imports of Hungarian agricultural goods, 36,864.4 million FT (KSE 1982, p. 350), minus estimated Hungarian ruble agricultural exports to the Soviet Union equals the lower bound estimate of Hungarian dollar agricultural exports to the Soviet Union, 27,119.2 million FT. The exchange rate of $1=37.7071 FT was used (KSE 1982, p. 12). Total 1982 Hungarian dollar agricultural exports equal 58,901.6 FT (KSE 1982, p. 28). Doliar trade balances appear in KSE 1982, p. 12. The 1981 lower bound estimate was calculated in a similar manner.

TABLE 4.—PRODUCTION ACTIVITIES OF THE AGRICULTURAL SECTOR [1], MEASURES BASED ON 1976 PRICES

[Value added,[2] 1970=100 for 1 to 8]

Year	Basic agricultural activity	Industrial activity including food processing	Construction activity	Transportation and communication activity	Trade activity	Service activity	Nonbasic agricultural activity, 2+3+4+5+6	Total agricultural output, 1+7	Nonbasic agricultural activity's share of total agricultural output, percent
1971	106.2	116.6	89.1	113.1	119.1	70.4	104.0	105.9	12.0
1972	108.0	130.4	77.7	116.6	100.9	73.5	107.2	107.9	12.2
1973	113.0	159.1	71.3	110.9	141.6	52.4	113.7	113.1	12.3
1974	112.5	192.0	80.7	118.2	186.1	50.5	134.7	115.2	14.3
1975	112.8	215.4	86.5	112.6	175.7	51.9	142.5	116.5	15.0
1976	104.1	230.5	82.7	108.7	169.3	53.8	145.1	109.2	16.3
1977	121.2	246.8	89.1	113.7	182.4	51.7	155.0	125.4	15.2
1978	117.5	271.8	96.1	126.4	184.1	53.5	167.6	124.2	16.6
1979	111.4	302.6	102.8	135.6	186.1	66.6	182.4	120.1	18.6
1980	117.5	297.3	111.0	132.8	191.7	71.7	184.2	125.6	18.0
1981	117.0	344.4	138.4	129.2	213.5	85.6	212.9	128.8	20.3
1982 [3]	131.9						220.4	142.4	19.0

[1] Agricultural sector includes state farms, agricultural cooperatives, household plots, auxiliary farms, and private farms.

[2] Includes all direct subsidies, but excludes rent and taxes; thus, differs from U.S. conception of value added.

[3] Based on growth in 1981 prices. See MSE 1981, p. 76; MSE 1982 , p. 101.

Sources: MA V, pp. 88–99; MSE 1981, p. 76; MSE 1982, p. 101.

Food processing, other industrial, and trade activities were selected for rapid growth on large-scale farms in the early 1970s to: (1) provide jobs for underutilized rural labor during the late fall and winter and for those rural workers being replaced by mechanization; (2) give farms, especially those with poor-quality land, access to new profit sources, thus reducing their dependence on state subsidies; (3) exploit the potential for profitable vertical integration in agriculture. Much of Hungary's success in non-basic agriculture has been due to centrally-determined incentives and to the ability of large scale farms to organize non-basic activities around either relatively inexpensive new technology or purchasable "used" machinery from industry.

III. Policy Changes Since 1980

A. Regulation of Personal Incomes

Hungarian income regulation has been successful in establishing a balance between the supply of consumer goods and consumer purchasing power and in preventing disproportionate wage differentials (at least those measurable by official statistics). However its defects include the inability to maintain work discipline, encourage the rational utilization of labor, and stimulate labor productivity.[11]

In agriculture, these defects have been caused by two factors. First, personal income should not be tied closely to profit because profit is not an accurate measure of productivity due to the complexity and non-uniformity of the price-tax-subsidy system, the presence of unevenly distributed land rents (even after land taxes have been levied), and farm-specific exemptions from regulations. Second, the upper bound on any farm's (or firm's) personal income payments, designed to be anti-inflationary, has also restricted the extent to which task-related incentive schemes can be utilized. In short, the development of incentives that stimulate individual productivity and the design of organizations that stress individual accountability has been neglected.

Price stability, full employment, and restrictions on officially measurable wage differences continue to be important in Hungary. However other pressures are forcing central decision-makers to reevaluate their policies. Hungarian exports to Western countries have not been increasing quickly enough. Relative to Hungary's import requirements, there are not a sufficient number of industrial products that are competitive on world markets. Domestic investment, partly because of balance of payments constraints, is growing slowly. Consequently, Hungary needs increases in productivity that do not require large investments. An income regulation system for the socialist sector that stimulates individual productivity is one answer.

Income regulation in agriculture became standardized for both state farms and agricultural cooperatives in 1980. Two income regulatory systems, denoted here as System A and System B, have been employed. System B has been applied on a wide-spread basis only beginning in 1983. Indeed from 1983 onward, each large-scale farm could select either A or B, but had to abide by the chosen system for several years. Each system consists of two phases: regulation of base wages and regulation of profit-sharing. Regulation of the base wage in System A is straightforward—a 2.3% increase in the farm's average annual base wage may be distributed tax-free, then a very progressive tax structure effectively prohibits any further increases in the average wage. System B is designed around growth in gross income per worker, where gross income is defined as total base wages paid plus profit. A farm's average annual base wage may increase tax-free by a percentage upper-bound dependent solely on that farm's gross income per worker during the previous year. In 1983, the above-average category for 1982 gross income per worker of 85,001 FT to 90,000 FT indicated an upper bound of 2.5%, while the top category of more than 120,000 FT indicated 4%.[12] B is mildly riskier than A because it is performance-related. In addition, B's parameter values suggest it will be attractive only to the richer farms. In 1983, approximately 80% of all large-scale farms selected A, which seems reasonable given that 71% of all large-scale farms had a 1982 gross income per worker of 90,000 FT or less.[13]

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[11] See Marrese (1981) for details.

The second phase, regulation of profit-sharing, is the same for both systems and is related to each farm's profit per worker. Here material incentives to work more intensely are stronger than those found in the first phase and somewhat stronger than earlier income regulation systems found in agriculture. The maximum tax-free sharing fund, expressed in percentage terms of total base wage paid, varies from 1% to 14%, depending upon current year's profit per worker and current year's base wage per worker. It is misleading to conclude that any single farm's increased work intensity during a single year could account for an increase in the profit-sharing fund equal to 14% of annual base wages. For instance, in 1982 all large-scale farms had an annual base wage of at least 34,000 FT and 53% had profit per worker of 30,000 FT or less.[14] In this range, the maximum tax-free percentage for 1983 was 9%. More importantly, for each 1% increase in the sharing fund, a farm must move to the next higher "profit per worker" category. Profit per worker categories are set at 5,000 FT intervals. Increases in profit per worker of more than 5,000 FT are large relative to 1982 levels of profit per worker. Therefore the short-term incentive of the profit-sharing phase is generally limited to an increase in the sharing fund of 1% of annual base wages.

Thus the incentives to increase productivity are rather limited. Moreover, A and B depend partly on the average wage, therefore encourage the irrational use of labor. In short, A and B retain some of the undesirable features of their predecessors.

The extent of income regulation experimentation within agriculture is the most convincing indication that the current system is far from satisfactory. In 1982 two competitions were held to select 45 participants for each of two income regulation experiments: the development: consumption ratio system (DCR) and the individual income tax system (IIT). A set of preconditions effectively guaranteed that only the more successful large-scale, agriculturally oriented farms apply. Each applicant was required to: (1) be either a state farm or agricultural producers' cooperative; (2) derive at least 70% of its income from basic agricultural activity; (3) have an average 1980-81 profit share of gross income of at least 40%; and (4) agree to remain in the experiment for several years. Those competing for inclusion in DCR were required to have an average 1980-82 development proportion of at least 30%. Here development is defined as the development fund from profits, depreciation allowances, plus any other enterprise funds going to development projects. It does not include state development subsidies and grants. Consumption is defined as income, part-time wages, student scholarships, subsidization of the factory cafeteria, vacations, travel, etc., and other employee benefits. Those competing for inclusion in IIT needed 1981 income per worker to be at least 46,000 FT. In total, 180 applications were received and 140 met the specified preconditions.

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[12] GSR 1982, p. 54.

[13] MEM FM 1982, pp. 20–95.

[14] Ibid.

DRC is simple. Once a farm's income tax, city tax, and profit earmarked for the reserve and the social-cultural funds have been withdrawn, remaining profit may be used to increase workers' income as long as the development proportion does not decline from its 1980-82 average.

IIT is based on marginal tax rates, ranging from 0% to 50%, that are applied to each individual employee's income. Individuals do not pay the tax, rather the farm pays the summation of all the individual tax burdens at the end of the year from a net profit fund.

DCR and IIT feature work incentives that are superior to those of Systems A and B because of the absence of an average wage break above which prohibitively progressive marginal tax rates become effective and because of the substantial role of profits. Unfortunately no empirical evidence is available because DCR and IIT were introduced recently.

However the 1980-83 experience of Baksa's agricultural cooperative (hereafter referred to as Baksa) with a variant of DCR provides some indication of the potential impact of these experiments. In 1978-79, Baksa's management, worried about the low average annual income per worker of 43,411 FT, decided that the existing wage-level regulation system was a serious obstacle to progress. On a micro-level, management became convinced that the existing piece-rate wage system was responsible for workers' relative disinterest in quality and cost-minimization. On a more macro level, even if individual incentives could be improved, enterprise-wide upper bounds on income increases would sharply restrict their applicability. Management sought to loosen the wage-regulation constraint via three basic ideas: surplus profit should imply a surplus wage fund; the members' entrepreneurial abilities could be utilized much more effectively; and individual material incentives to participate in profit-maximization could be strengthened.

After consulting with the entrepreneurial research group at Karl Marx Economics University and much internal debate among all members of the cooperative, a more decentralized organizational form was adopted. An enterprise management team, including Baksa's president and chief accountant, was established from the cooperative's managerial and technical personnel. The management team's responsibilities include: (1) the decomposition of cooperative activities into tasks which can be undertaken by workers' groups (defined below); (2) the initial establishment of workers' groups; (3) the determination of a contract, in conjunction with each workers' group, that specifies internal transfer prices, obligations, and other conditions faced by that workers' group;[15] (4) the continued maintenance of the cooperative's tax and regulatory obligations.

A workers' group is simply a profit center within the cooperative organized around a specific task. Examples appear in all Baksa's productive activities: crop production, chicken farming, machinery repair and rental, mixing of fodder, the processing of plastics, construction, transportation, metal processing, consultant services, maintenance services, and meal services. Subject to the conditions established in its contract with the cooperative, each workers' group has decision-making authority over: (1) all inputs, including the size and composition of the labor force; (2) monthly wages and the division of year-end profit among its members; (3) management selection and dismissal within the workers' group via voting by all members of the workers' group; (4) determination of hiring and firing practices, working hours, and working conditions.

Other conditions surrounded the introduction of the experiment. The cooperative agreed to a predetermined level of income tax and to fixed tax rates on capital and labor usage for three years. The cooperative also agreed to follow DCR. Participants in workers' groups received wage guarantees and had the right to leave their groups. Finally, the major source of profit-sharing became the profit attributed to the workers' group, although some profit-sharing still existed from the enterprise's overall profit fund because 30% of the profit of a workers' group was transferred to the cooperative to cover some part of taxes and administrative costs.

The number of workers' groups started at 8 in 1980, then increased to 14, 15, and 19 during 1981, 1982, and 1983 respectively. Participants numbered 237 in 1980, 356 in 1981, 398 in 1982, and 500 in 1983. Participants' share of the cooperative's labor force mesured 42% in 1980, 62% in 1981, 66% in 1982, and 83% in 1983.

Overall the results have been overwhelmingly positive, even though there have been a few workers' groups that have maintained losses. Comparing 1982 levels with 1979 levels, the following increases were observed: labor force 6.9%; land 0.4%; value of fixed assets 11.2%; value of production 86.6%; profit 100.6%; profit per worker 87.6%; personal income per worker 35.3%. Given that the required development proportion for DCR was set at 22.3%, the actual development proportions of 25.5% in 1980, 24.4% in 1981, and 23.2% in 1982 were judged favorably. Finally, the proportion of the year-end profit share in personal income increased throughout the experiment: 8.2% in 1979, 10.7% in 1980, 16.0% in 1981, and 17.3% in 1982.

The members and management of Baksa are quite enthusiastic about the experiment's results. Besides pointing to the above-mentioned trends, they cited the introduction of cost-cutting procedures and new products as proof of the vitality of their experiment.

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[15] Each contract defines "profit" for a specific workers' group. Internal transfer prices are set to reflect prices prevailing in the "outside world".

B. Changes in Prices, Subsidies, and Taxes

Knowledge of the pre-1980 system of purchase prices, subsidies, and taxes is necessary to understand the impact of recent changes in these policy instruments. The level of purchase prices were set so that a farm of average-land quality could cover average costs plus a small (normal) profit margin. Individual purchase prices were generally above the corresponding Hungarian export prices for non-crop outputs and below for crop outputs. Subsidization occurred in three areas: investment, material inputs (energy, fertilizer, farm machinery, fodder, and pesticides), and price supplements of crop prices to farms with below-average land quality. Each price supplement is expressed as a percentage of the corresponding purchase price and depends on the crop and farm (land quality) under consideration. Taxes are earmarked to funnel funds to the government, to restrain wage increases, to stimulate farm investment and investment in rural infrastructure, and to extract rent from farms with above-average land quality.

In section II, investment subsidies were shown to have decreased substantially since 1980, forcing farms to invest greater proportions of their own resources in any investment project. Experience during the early 1980s indicates that this change in policy has stimulated the construction of cheaper and more quickly constructed structures.[16]

The direction of recent changes in purchase prices, taxes, and other subsidies may be illustrated by the following example. Assume that three representative farms exist in Hungary. Each farm has uniform land quality—farm A excellent, farm B average, and farm C poor. In order to consider the after-tax profit of these farms, define:

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[16] Kostyál (1983), p. 108.

i	subscript indicating output i	$i=1,\cdots,I'$ for non-crop outputs $i=I'+1,\cdots,I$ for crop outputs
j	subscript indicating material input j	$j=1,\cdots,J$
Q	farm type	Q=A farm with excellent quality land Q=B farm with average quality land Q=C farm with poor quality land
X_i^Q	amount of output i produced on farm Q	
Y_j^Q	amount of input j used on farm Q	
P_{xi}	Hungarian hard-currency export price of output i, in Ft	
P_{yj}	Hungarian hard-currency import price of material input j, in FT	
α_i	% of direct subsidization of non-crop output i relative to P_{xi}, $\alpha_i > 0$ for $i=1,\cdots,I'$	
α_i	% of direct taxation of crop output i relative to P_{xi}, $\alpha_i > 0$ for $i=I'+1,\cdots,I$	
β_j	% of direct subsidization of material input j relative to P_{yj}, $\beta_j > 0$ for $j=1,\cdots,J$.	
γ_i^Q	price supplement for crop output i, in %; a function of the type of output and quality of land; $\gamma_i^Q > 0$ for $i=I'+1,\cdots,I$	
T^Q	land tax on farm Q based on land quality and quantity	
Θ^Q	labor costs, other costs, and other taxes on farm Q	

If π^Q represents after-tax profits for farm Q in the pre-1980 period, then:

$$\pi^A = \sum_{i=1}^{I'} (1+\alpha_i) P_{xi} X_i^A + \sum_{i=I'+1}^{I} (1-\alpha_i) P_{xi} X_i^A - \sum_{j=1}^{J} (1-\beta_j) P_{yj} Y_j^A - T^A - \Theta^A$$

$$\pi^B = \sum_{i=1}^{I'} (1+\alpha_i) P_{xi} X_i^B + \sum_{i=I'+1}^{I} (1-\alpha_i) P_{xi} X_i^B - \sum_{j=1}^{J} (1-\beta_j) P_{yj} Y_j^B - \Theta^B$$

$$\pi^C = \sum_{i=1}^{I'} (1+\alpha_i) P_{xi} X_i^C + \sum_{i=I'+1}^{I} (1-\alpha_i)(1+\gamma_i^C) P_{xi} X_i^C - \sum_{j=1}^{J} (1-\beta_j) P_{yj} Y_j^C - \Theta^C$$

Let * denote tax and subsidy rates since 1980 and π^{*Q} represent after-tax profits for farm Q during that period, then:

$$\pi^{*A} = \sum_{i=1}^{I'} (1+\alpha_i^*) P_{xi} X_i^A + \sum_{i=I'+1}^{I} (1-\alpha_i^*) P_{xi} X_i^A - \sum_{j=1}^{J} P_{yj} Y_j^A - T^{*A} - \Theta^A$$

$$\pi^{*B} = \sum_{i=1}^{I'} (1+\alpha_i^*) P_{xi} X_i^B + \sum_{i=I'+1}^{I} (1-\alpha_i^*)(1+\gamma_i^{*B}) P_{xi} X_i^B - \sum_{j=1}^{J} P_{yj} Y_j^B - \Theta^B$$

$$\pi^{*C} = \sum_{i=1}^{I'} (1+\alpha_i^*) P_{xi} X_i^C + \sum_{i=I'+1}^{I} (1-\alpha_i^*)(1+\gamma_i^{*C}) P_{xi} X_i^C - \sum_{j=1}^{J} P_{yj} Y_j^C - \Theta^C$$

Actually π^{*Q} do not reflect the actual post-1980 situation, rather the point to which the post-1980 trend is moving.

For the pre-1980 period, all farms faced the same input prices and non-crop output prices, however these prices did not equal the relevant trade prices. C received higher crop output prices than A and B in order to encourage the more poorly endowed C to grow crops. However these purchase prices $[(1-\alpha_i)(1+\gamma_i^C)P_{xi}]$ were generally less than corresponding export prices (P_{xi}). Only A paid the land tax.

The direction in which policy has shifted since 1980 has produced four effects. First, all farms face the same input prices which now equal the relevant trade prices. Actually farm machinery is still subsidized but subsidies on energy and fertilizer have been reduced to zero. The key is that input subsidies are gradually disappearing. Second, because purchase prices of inputs have risen faster than those of outputs, farm B could no longer cover average costs plus a small profit margin. Therefore price supplements now also apply to B, but are smaller than those received by C. In addition, α_i^* has tended to be less than α_i for $i=I'+1,\cdots,I$. Thus farms are facing purchase prices for crops that are closer to the relevant export prices than previously. Third α_i^* has tended to be greater than α_i for $i=1,\cdots,I'$ in order to stimulate farms to maintain their non-crop production in spite of rising input costs. This policy is not as inefficient as it first sounds because there is a large difference between Hungarian export and import prices for non-crop items due to the high level of agricultural protectionism in Western Europe. Fourth, the land tax is in the process of being changed so that $T^{*A} > T^A$.

In summary, the new price-subsidy-tax system is closer to the relevant set of shadow prices than the old system. Of course, this change will be more important if farms become more interested in profit-maximization. Therefore the eventual impact of these price-subsidy-tax changes depend on the reform of income regulation.

C. Inter-Enterprise Cooperation

Technically operated production systems (TOPS) are industry-like input-output programs developed at a TOPS headquarters for use on affiliate farms. The essence of TOPS is that every productive phase for a particular product is organized to fit together harmoniously as a technologically advanced process.

This form of horizontal integration has improved in several ways since 1980. First, affiliate farms better utilize the biological technical and agroeconomical advisory services of TOPS headquarters. This is partly due to the increased scarcity of investment funds which has forced farms to rely more heavily on biological discoveries that promise higher yields. Farms also seem to understand more clearly the division of labor that a TOPS headquarters facilitates. Experts at the TOPS headquarters take the time to follow current research and adjust it to the Hungarian environment. Agronomists and engineers at affiliate farms are then free to concentrate on day-to-day problems. Second, TOPS headquarters have accumulated a wealth of detailed knowledge about their affiliate farms over the past 15 years and now are able to answer very specific inquiries concerning each parcel of land. Third, the incentive contradiction of the 1970s has disappeared. At that time the management of a TOPS headquarters was interested in increasing yields per hectare or animal product per kg. feed, while the management of an affiliate farm should have been concerned with either profit or gross income maximization. Currently, each TOPS headquarters continue to provide some affiliate farms with access to Western technology that would otherwise be unavailable to them.

The other major organizational development is the increase in decentrally-initiated vertical integration due to the cutback in state investment subsidies and to regulatory incentives to develop non-basic agricultural activities. During the past few years farm management, with the assistance of local representatives from the National Bank, actively has sought to engage either in joint ventures with food processing plants and marketing organizations or in production tailored to the needs of local industry.

D. Growth of Non-Basic Agricultural Activities

For development of non-basic agricultural activities, the state has offered special subsidies to large-scale farms with poor-quality land. These special subsidies had to be repaid within ten years from a production tax levied on non-basic activities. Between 1974 and 1978, poorly endowed large-scale farms made use of only 190 million FT out of the 450 million FT earmarked for these subsidies. Most of this amount was requested after 1976. In fact, only since 1978 have farms seriously taken advantage of the state assistance offered for the development of non-basic activities.[17] In my opinion, this change reflects the greater pressure that farms have felt because of the cutback in state subsidies and the decreased profit opportunities in several branches of basic agricultural activity.

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[17] Kostyál (1983), p. 115.

Two consequences of the growth in non-basic activities have already been noted: the creation of employment opportunities and the use of profit from non-basic activities to support otherwise unprofitable farms. However the third consequence may prove to be the most important in the long run: heightened domestic competition.

E. The Breaking Up of Food Trusts

One of the most visible changes in agriculture since 1980 has been the breaking up of food trusts into smaller, potentially competitive independent enterprises. The elimination of trusts occurred as follows: July 1, 1980—tobacco, sugar and wine; Jan. 1, 1981—candy; Jan. 1, 1982—beer, chicken, and canned goods; scheduled for Jan. 1, 1984—liquor. The meat and milk trusts still exist.

Trusts were eliminated because they were obstacles to a profit-related incentive structure and to product innovation. Members of a trust shared the profits of the entire trust and this profit-sharing system was noted for its strong "leveling of profits." Thus members did not share profit according to their performance.

Since the trusts have been eliminated, inter-firm competition has taken place primarily in the Budapest area. Elsewhere local monopolies tend to exist because no new firms have entered the market (neither have any gone bankrupt). Moreover, employment patterns among these enterprises have not changed significantly. The major positive consequence has been a wider assortment of products for consumers.

IV. Conclusions

Is Hungarian agriculture moving in the right direction? Two issues underline this question. First, because trade protection is given to agricultural sectors throughout the world, is it worthwhile to develop an export expansion strategy based on agriculture? Second, if the first issue can be resolved in favor of agriculture, is Hungary developing along appropriate lines?

Negative foreign trade considerations abound for Hungarian agriculture. Agricultural protectionism has been strong in Western Europe and does not appear to be weakening. The Soviet Union and other CMEA countries are reluctant to pay for agricultural imports from Hungary in dollars. Hungary's special dollar door to the Soviet Union may remain open only through 1985. Developing countries are applying modern agricultural technology effectively as Brazil's sudden emergence as one of the world's largest chicken exporters demonstrates.

On the other hand, Hungary has no alternative other than to rely more effectively on agricultural foreign trade. Industrial export performance has been much more disappointing than even Hungary's agricultural difficulties in penetrating Western markets. Tourism may be an important source of hard currency in the future, but Hungary needs dollars now. Simply stated, Hungary is under tremendous pressure to find new agricultural markets and products.

The second issue is more straightforward. Growth trends in profit, value added, the net agricultural trade balance, and non-basic agricultural activities are encouraging. The response of large-scale farms to the reduction in state subsidies and the general tightening of investment funds has been impressive—construction of cheaper, more quickly completed buildings, growth of non-basic activities, greater reliance on TOPS enterprises, and a more aggressive attitude toward creating joint ventures. In addition, as long as Hungarians are willing to accept substantial differences in officially measurable take-home pay (for that has been a clear consequence of the Baksa experiment), the reform of income regulation has great potential. Finally, the simplification of the price-tax-subsidy system is progressing to a point at which policy tradeoffs are measured more easily.

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HUNGARIAN AGRICULTURAL PERFORMANCE AND PROSPECTS DURING THE EIGHTIES

By Thomas A. Vankai*

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I. INTRODUCTION AND SUMMARY

Hungary has been a regular net exporter of agricultural products, a small competitor for the United States in grain and poultry meat exports, but a significant importer of oilmeal, cotton, and cattle hides of which the United States has a small market share. However, because of gradual deterioration in its trade balance since 1973, Hungarian authorities, beginning in 1979, introduced an austerity program of curtailing imports, domestic consumption, and investments.

This paper examines the effects of this policy shift on Hungarian agricultural trade pattern in the eighties. It reviews the performance of the agricultural economy during 1976-80 and provides some projections for 1985 and 1990. The deterioration of terms of trade which led to the indebtedness has probably halted, but difficulties in competing in Western markets and servicing the accumulated debts will continue most likely through this decade.

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Hungary with the most market-oriented economy among the members of Council for Mutual Economic Assistance (CMEA), expected to expand constantly its economic reform of trusting local managers with decisionmaking power and widening the role of prices in resource allocation. Hungary became the first CMEA member to permit limited convertibility of its currency with floating rates quoted weekly. The convertibility facilitates foreign trade in forints with partners dealing in hard currency. Internally the convertibility helps to integrate the economy with world market forces.

Land use in Hungary in the eighties may change only slightly. Some land, at the expense of forage crops, may be taken out of agricultural production as urbanization expands. About 3 million hectares currently sown to grains are planned to be maintained until 1985. About 14.2 million tons of grain are projected to be produced on this area by 1985 and 14.9 million by 1990 compared with an average 12.5 million tons annually during 1976–80. About 900,000 tons of grain should be available for net exports by 1990.

Oilseed production plans also are based on increased yields and no area expansion. Production should total 880,000 tons of sunflowerseed, soybeans, and rapeseed combined by 1990, more than double of 1976–80 average production. This volume will relieve the pressure for increasing protein meal imports. Hungary has been self-sufficient in sugar and potato production in normal weather years. No area expansion is planned for these crops; rather, area planted with potatoes should decline.

Meat production should increase an average 1 percent annually until 1991. An expected slowdown in growth of farm income and reduced state subsidies may constrain investments in more efficient feeding technology and thus retard growth of productivity. Declining profitability of meat production and worsening export potentials are also reducing stimuli for expansion.

The Hungarians plan no increase of investments in the whole economy during 1981–85 compared with the 1976–80 level. The reduced state subsidies will be disbursed according to established priorities. Shelter construction for dairy cows and hogs and the planting of new vineyards will receive preference.

An anticipated slow growth in industrial production is expected to halt the outflow of workers from the agricultural sector. State and cooperative farms will continue to earn income also from industrial and service activities. Earnings from crops or livestock produced by the private households will continue to supplement individual wages or income derived from enterprise profits.

The agricultural trade pattern is expected to show little variation, livestock, meat and meat products will remain the leading export commodities followed with fruits, vegetables, grains, wine, and vegetable oil. The USSR, because of its shortage in grains, meat, fruit, and vegetables, will remain the leading destination for Hungarian agricultural exports followed by East and West European countries. The goal is to increase total agricultural exports in 1981–85 by one-third of the 1976–80 level. Two-fifths of this increased exports should be sold for convertible currencies.

Hungary was the only East European country to have a positive agricultural trade balance with the United States during 1979–82.

Soybean meal was the principal U.S. agricultural export to Hungary, and canned ham the principal U.S. agricultural import from Hungary. No drastic change in this pattern is likely.

II. PLANNING AND POLICY

The central plan in Hungary is largely macroeconomic. The macroeconomic plan indicators—national income, industrial and agricultural production, and investments—reflect Government expectations based on policy considerations and economic projections. The Government influences enterprise managers with the macroeconomic indicators to make decisions in accordance with national objectives. Rather than establishing a multitude of production and input quotas, the Hungarian agricultural economy is guided through indirect means such as fixing key commodity prices, establishing credit rates and priorities, and assessing differentiated taxes. Within the bounds of Government regulations, a profit-sharing scheme motivates managers to strive toward efficient operation and to reach the planned goals.

In the agricultural sector the management of each state and collective farm must prepare a 5-year plan. The plan is prepared according to instructions provided by the Ministry of Agriculture. It must follow the national economic objectives and be approved by the Ministry. Beyond these limited guidelines, farm managers have considerable flexibility. Even if the planned output of a farm deviates from the national guidelines, for example, it is usually accepted by the Ministry if the deviations are justified by local circumstances. The individual enterprise plans are aggregated in the Ministry. If the sum of the planned accomplishments indicates that the national production goals will not be reached, then the procurement or input prices, credits, or subsidies are altered to influence the farm managers to follow the nationally desired direction. A Hungarian survey revealed that an overwhelming majority of 1976–80 farm production plans conformed with the national objectives. The principal weakness of many plans was the reliance on material and technical inputs which proved to be unobtainable (12, 10/2/76).[1]

Construction of a detailed 5-year plan by the state is made more difficult because of Hungary's large dependence on foreign trade with uncertain demand and market prices. Even the intra-CMEA trade prices since 1975, have been revised annually on the basis of preceding 5-year moving average world prices. These prices were previously fixed for the duration of the 5-year plan periods. Because of these factors, the 1981–85 plan is regarded even by the Chairman of the National Planning Office as a "framework" rather than a binding law (12, 11/7/81).[2] This differentiates the Hungarian plan from the Soviet model used in most East European countries where the plan objective has the force of law.

The principal plan indicators for national income, production, and investment reflect slower economic growth in 1981–85 than in 1976–80. For example, the planned national income growth is 14 to

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[1] Numbers in parentheses refer to references cited at the end of this report.

[2] Statement by Lajos Faluvegi.

17 percent for 1981-85 compared with 27 percent achieved during 1976-80 (table 1).

TABLE 1.—HUNGARY: PRINCIPAL PLAN INDICATORS

Item	1976-80/1971-75		1981-85/1976-80 plan [3]
	Plan [1]	Actual [2]	
	Percent change		
National income	30-32	27	14-17
Industrial production	33-35	29	19-22
Agricultural production	16-18	15	12-15
Per capita real income	18-20	17	6-7
Investment [4]	32	32	−1 to 1

[1] Source: (16).
[2] Source: (12, 2/22/81).
[3] Source: (12, 12/23/80).
[4] In the socialized sector only.

National income in 1976-80 was less than planned. The growth rate decelerated since 1977 and turned negative in 1980, probably because of a considerable decline in investments. But, growth resumed at 2.5 and 2 percent rate in 1981 and 1982, respectively. Deteriorating terms of trade resulting in a negative trade balance has been the principal cause of the slowdown. Until 1978, imports were relatively high, despite unfavorable trade balances, and maintained in order to avert a sudden decline in domestic consumption and investment. But policymakers chose to curtail imports and step up exports after hard currency debts to the West by 1979 accumulated to $6.5 billion, an uncomfortable level, since total exports to the developed countries amounted to about $3 billion only (19).

Factors contributing to the economic slowdown in addition to the deteriorated terms of trade included less-than-planned industrial output, a decrease in new entries into the labor force, a decline in productivity, and a shift in outlays from productive to service related undertakings such as environmental protection. Also the continuing growth of investments in the agricultural sector during 1976-80 deprived industry of funds which might have generated larger returns than in the agricultural sector.

Agricultural output grew close to the lower range of the planned growth rate. For 1981-85, lower production growth rates are planned for both industry and agriculture than the actual accomplishments were between 1976-80.

Per capita real income during 1981-85 is expected to exceed that of 1976-80 by only 6 to 7 percent. This compares with a 17-percent increase between 1971-75 and 1976-80, when an 18- to 20-percent increase was planned. Investments in 1976-80 over 1971-75 increased 32 percent in the socialized sector, equalling the planned rate. No growth of investment is planned for 1981-85, and the share of investment in national income, 36 percent in 1976-80, should decline considerably to the benefit of consumption.

During 1976-80, agriculture contributed 15 percent to national income; it accounted for 13 percent of total investment and 20 percent of labor force. By 1985, agriculture's share in national income and investment is likely to stay at this level; but, a small reduction in the labor force is anticipated.

After the introduction of the New Economic Mechanism in 1968 (a shift from command economy to limited market economy) the share of agricultural investment contributed by the enterprises increased from 41 percent to 60 percent by 1980. The share of investments from Central Government funds declined simultaneously (5, 11/26/80). The target for enterprise share in total agricultural investments is 64 percent for 1981–85 and credit's share in investment should increase to 18 percent between 1981–85 from 17 percent between 1976–80 (6). The Government requires that farm managers use long-term bank credits rather than grants.

The plan does not call for any substantial changes in agricultural policy. The present cropping pattern and types of landownership are likely to prevail. In 1980, cooperatives managed 64 percent of agricultural land, state farms 30 percent, and private individuals 6 percent. During 1976–80, through amalgamation, the number of cooperative farms declined from 1,598 to 1,350, and the number of state farms declined from 150 to 132 (1,302 and 129 in 1983, respectively). During those 5 years, the average size of cooperative farms increased from 3,161 to 3,961 hectares (ha.) and the average size of state farms increased from 6,602 to 7,558 ha. The Government discourages further amalgamations and stimulates horizontal and vertical cooperation instead. Horizontal cooperation among farms should increase economies of scale in specialized crop and livestock production; vertical cooperation with the processing industry should lead to better coordination between production and marketing of final products. Auxiliary activities of farm labor in construction and retail marketing is encouraged to provide opportunities for earning additional income.

Members of cooperatives and employees of state farms cultivate about 350,000 ha. of socialized land in plots of less than 0.57 ha. for personal use. About 120,000 private farmers own 197,000 ha. (1). Approximately one-half of the population is involved in some kind of farming activity and about one-half of the output privately produced reaches the market (3).

III. AGRICULTURAL PRODUCTION

The gross agricultural production target of 12- to 15-percent growth during 1981–85 is below the 16- to 18-percent target set for 1976–80. Crop production should grow 16 to 18 percent and livestock production should grow 12 to 14 percent. Since private production is expected to grow only a few percentage points, production growth in the socialized sector must exceed the average targets. Actual growth of gross agricultural production was 15 percent during 1976–80, 11 percent in crop sector, and 21 percent in livestock sector, though a faster growth for crops than for livestock was planned. Gross agricultural production growth during 1981 and 1982 matched plan goals but the livestock sector continued to grow at a faster rate than the crop sector.

A. Land

Loss of agricultural land must not exceed 100,000 ha. during 1981–85, according to the plan. This compares with 241,000 ha. diverted to nonagricultural uses during 1976–80. Government controls have been tightened for the preservation of cultivated land. Permission from the Government must now be obtained for all land converted to nonagricultural purposes. Cultivation of all available land is enforced, and no land is permitted to lie fallow without sufficient reason. Enterprises are to be penalized if they fail without justification to utilize all their agricultural land.

B. Grains

Area sown to grain—about 60 percent of cultivated land—is planned to be maintained at the current 2.9 to 3 million ha., of which corn should occupy 1.2 million. The grain production target for 1985 is 14.7 to 15.7 million tons, of which 7.5 to 7.8 million is to be corn (9, 12/30/80). This target is apparently based on an expectation of increased yields on a stabilized area (table 2). According to this plan, 12 to 17 percent more grain should be produced in 1981-85 than 1976-80. This compares with a 10.7-percent increase in 1976-80 over 1971-75 output, which was a sharp decline from the 39-percent growth achieved between 1966-70 and 1971-75.

TABLE 2.—HUNGARY: GRAIN AREA, YIELD, AND PRODUCTION

Commodity and year	Area (million ha.)	Yield (ton/ha.)	Annual average increase (percent) [1]	Production (million tons)
Total grain:				
1971-75 average	3.17	3.57	6.4	11.33
1976-80 average	2.95	4.25	3.5	12.54
1981	2.74	4.61	([2])	12.63
1982	2.84	5.16	([2])	14.65
1985 plan [3]	2.95-3.00	4-90-5.32	2.0-3.3	14.7-15.7
1990 projection [4]	2.80	5.33	1.9	14.92
Corn:				
1971-75 average	1.41	4.17	5.2	5.93
1976-80 average	1.30	4.86	3.1	6.30
1981	1.16	5.86	([2])	6.81
1982	1.13	6.86	([2])	7.75
1985 plan [3]	1.25-1.30	6.00	3.1	7.50-7.80
1990 projection [4]	1.11	6.75	2.8	7.49

[1] Increase is compared with the preceding 5-year average.
[2] Not calculated.
[3] Sources: (9, 2/18/81, 7/8/81).
[4] Source: (4).

Source: Hungarian Agricultural Pocketbook, various editions.

In view of the planned leveling off in agricultural investments, and based on 1976-80 performance, the higher end of the planned production growth appears to be too optimistic. There is no substantiating evidence that the slowdown in growth experienced during 1976-80 will be reversed during 1981-85 and 14.2 million tons in 1985 and 14.9 million in 1990 would be a more likely output (4).

The Hungarian plan is based on biologically improved seeds, quicker adaptation of new scientific knowledge, more timely cultivation, and reduction of harvest losses. However, a profit squeeze caused by faster increases in input and machinery prices than for prices received by producers will reduce the financial ability of enterprises to adopt substantial technical innovations or even to maintain past levels of spending. Indeed, the price squeeze may result in reduced purchases of inputs and machinery offsetting the favorable effects on production generated through managerial inventiveness hoped for by Hungarian planners. A $130.4 million loan from the World Bank approved in May 1983 for building grain storage facilities and buying machinery, however, is projected to result in considerable waste reduction by 1985/86 marketing year, when construction is to be completed.

The average yield of all grains produced increased at an annual rate of 3.5 percent between 1971-75 and 1976-80, slower than between previous plan periods. The still good results can be attributed to some extent to the spread of uniform cultivation practices, called "production systems" by the Hungarians. Members of the system attained yields well above the national average. A technically advanced state farm is the production system organizer. The lead-organizer farm provides machinery, seed, and advisory service to the participants in the production system for a fee. Additional farm participation in the system slowed in recent years because of scarcity of investment funds and the lower margin of returns on new investments when less efficient farms join the program (table 3).

Based on decelerated rate of yield increases during 1976-80, no planned increases in inputs, and the slowdown in expansion of production systems, a continued slow down of yield increases in the eighties is expected (4) (table 2). Average wheat yields, however, can be raised by increasing the proportion of feed wheat varieties, which usually yield 4 to 6 quintal per hectare more than the food quality wheat.

TABLE 3.—HUNGARY: AREA USED IN PRODUCTION SYSTEMS, SELECTED YEARS

[In thousands of hectares]

Commodity	1975	1980	1983	1985 plan [1]
Corn	587	862	1,000	974
Wheat	111	944	1,150	1,215
Sunflowerseed	52	226	235	263
Sugar beets	52	77	105	104
Other crops	108	91	210	629
Total area	910	2,200	2,700	3,185

[1] (11, 1/19/83).

Source: (9, 5/20/81).

C. Oilseeds

Oilseeds occupy about 6 percent of the cultivated land. Sunflowerseed has been sown on three-quarters of total oilseed area; rapeseed and soybeans are next in importance. Sunflowerseed yield increased between 1971-75 and 1976-80 at an annual rate of 5.3 percent and exceeded the 1980 target. In 1981, however, sunflowerseed was sown on more than 300,000 ha., exceeding the 1985 target; this was due, in addition to advantageous prices, to unusual weather-related circumstances when sunflower replaced grains not sown in the fall. The larger than planned area was maintained also in 1982. The growth planned for oilseed production must, as in the case of grains, also derive from yield increases, since no area expansion is planned. The plan does not specify goals for yields, but the 1985 yield targets can be deduced on the basis of a planned 70-percent growth in vegetable oil production and a 50 percent growth in oilmeal production (9, 7/8/81) (table 4).

Sunflower with good potential for further yield increases will account for the bulk of the oilseed production increase. Less emphasis is put on rapeseed because its erucic acid content limits its use. The growth of soybean production was impeded by low yields and consequently low profitability, but planners recently called for expansion of area, influenced by improved yields in the last few years. Total oilseed production could equal 700,000 tons by 1985 and 800,000 tons by 1990 (4).

D. Other Crops

Sugar beet area is planned to remain at the present level of 115,000–125,000 ha. until 1985 and is projected to remain stable throughout the eighties (4). The goal is to assure self sufficiency in sugar supply with the help of higher yielding varieties and varieties with higher sugar content. Production efficiency will be enhanced by concentrating plantings closer to processing factories. Potato area will be permitted to decline if increasing yields compensate for area losses.

Orchards will be planted on 25,000 ha., one-fourth of which will be apple orchards. New vineyards will be established on 15,000 ha., but more than twice as large an area will be taken out of cultivation (11, 8/24/81)). The state will subsidize orchard and vineyard plantings on socialized farms and for small producers, if they form a partnership on at least 5 ha. of consolidated area. Plans for planting vineyards and orchards were not fulfilled in 1976–80. If the current plans are realized, annual fruit production could increase from the present 1.4–1.5 million tons to 1.7 million by 1985.

A reduction in the forage crop area by 80,000 to 90,000 ha. will account for most of the 100,000 ha. anticipated to be converted to nonagricultural use. The loss of forage area is supposed to be compensated for by an increase in the yields of meadows and pastures, a goal repeated in every successive plan with no results so far.

TABLE 4.—HUNGARY: AREA, YIELD, AND PRODUCTION OF SELECTED CROPS

Commodity and year	Area (1,000 ha.)	Yields (ton/ha.)	Average annual yield increase (percent)[1]	Production (1,000 tons)
Sunflower:				
1971–75 average	114	1.24	2.2	141
1976–80 average	185	1.61	5.3	298
1981	302	2.07	(2)	624
1982	296	1.95	(2)	579
1985 plan	260[3]	1.93–2.01[4]	3.7–4.6	500–520
1990 projection	290	2.12	2.3	615
Rapeseed:				
1971–75 average	45	1.34	0	60
1976–80 average	53	1.51	2.4	80
1981	56	1.35	(2)	76
1982	58	1.46	(2)	85
1985 plan	75[3]	NA	NA	NA
1990 projection[5]	60	1.67	.8	100

TABLE 4.—HUNGARY: AREA, YIELD, AND PRODUCTION OF SELECTED CROPS—Continued

Commodity and year	Area (1,000 ha.)	Yields (ton/ha.)	Average annual yield increase (percent) [1]	Production (1,000 tons)
Soybeans:				
1971–75 average	Ins.	Ins.	Ins.	Ins.
1976–80	25	1.48	(2)	37
1981	22	2.20	(2)	48
1982	26	2.32	(2)	60
1985 plan	50–55 [3]	NA	(2)	NA
1990 projection [5]	55	3.00	6.0	165
Potatoes:				
1971–75 average	112	11.78	2.4	1,319
1976–80 average	84	14.21	3.8	1,194
1981	61	18.20	(2)	1,112
1982	56	17.34	(2)	966
1985 plan	NA	NA	(2)	(2)
1990 projection [5]	55	19.00	2.4	1,045
Sugar beets:				
1971–75	94	32.94	.7	3,096
1976–80 average	118	33.69	.4	3,975
1981	122	38.75	(2)	4,719
1982	126	42.56	(2)	5,370
1985 plan [3]	115–120	37.69	2.2	4,400
1990 projection [5]	123	39.84	1.4	4,900

NA—Not available; Ins.—Insignificant.

[1] Increase is compared with the preceding 5-year averages.
[2] Not calculated.
[3] Source: (9, 2/18/81).
[4] Source: (9, 7/8/81).
[5] Source: (4).

Source: Hungarian Agricultural Pocketbook, various issues.

E. Livestock and Products

Between 1980 and 1985 the number of sheep is planned to increase by 700,000, and the number of cows is to remain unchanged. No specific plan targets for other livestock numbers have been published (table 5). Output of total meat is planned to increase 1.5 percent annually based on separate plans for beef, pork, mutton and poultry production (table 6). Mutton and poultry meat production is to grow at a faster rate than pork production, while no growth for beef production is planned (9, 2/18/81). The increase in livestock production must be generated by increased productivity rather than through increasing inventory.

TABLE 5.—HUNGARY: JANUARY LIVESTOCK INVENTORY

[In millions]

Category	1971–75 average	1976–80 average	1981	1982	1983	1985 plan
Cattle	1.93	1.93	1.92	1.94	1.92	NA
Hog	7.61	7.80	8.33	8.30	9.04	NA
Sheep	2.04	2.56	3.09	3.14	3.18	3.63
Poultry	56.70	62.68	65.04	67.50	[1] 68.00	NA

NA—Not available.

[1] Estimate.

Source: Hungarian Agricultural Pocketbook (various issues).

Hungary met its 1976–80 meat production target. The annual growth rate averaged 3.1 percent between 1971–75 and 1976–80 average production. It is unlikely, however, that the even more modest plan for 1985 will be met. Pressure for increasing production has abated. Higher retail prices for meat retarded domestic consumption growth, exports are not profitable under present production costs, and it is difficult to find new markets. With reduced enterprise profits, curtailed state subsidies, and low producer prices relative to input costs, the stimulus is inadequate for substantial growth. The projected increase in total meat production is 1 percent annually through 1991 from the 1976–80 base period compared with the planned 1.5-percent annual gains by 1985 (table 6) (4).

TABLE 6.—HUNGARY: LIVESTOCK PRODUCTION AVERAGES AND PROJECTIONS

[In thousands of tons (liveweight)]

Category	1971–75 average	1976–80 average	1981	1982	1985 plan [1]	1991 projections [2]
Beef	324	337	318	333	328	328
Pork	968	1,108	1,183	1,219	1,250	1,280
Mutton	35	44	46	49	54	61
Poultry	317	426	482	527	500	524
Total meats	1,644	1,915	2,029	2,128	2,132	2,193

[1] (9, 2/18/81).
[2] (4).

[In percent]

Category	Annual average rate of change		
	1976–80/1971–75 average	1985 plan/1976–80 average	1991 projection/1976–80 average
Beef	0.8	−0.5	−0.2
Pork	2.7	1.8	1.2
Mutton	4.7	3.0	2.6
Poultry	6.0	2.3	1.6
Total meats	3.1	1.5	1.0

Hungary experienced significant increases in milk yield per cow through improving local breed with Holstein heifers and semen imported mainly from the United States. The yield jumped to 3,600 liters per cow in 1980 from 2,450 by 1975. Since fewer but more productive cows will satisfy the demand for milk and milk products, approximately 40,000 dairy cows will be replaced in 1985 with cows bred for meat production. Milk output should increase 7 percent through a 13-percent milk yield increase per dairy cow. Only a slight increase is planned in egg production (9, 2/18/81). Any increase in milk and egg production will be channeled to the domestic market, while increased meat production will serve both the domestic and export markets.

A large share of the livestock production has been provided by private producers. In 1980, 53 percent of hogs, 30 percent of cows, 14 percent of sheep, and 73 percent of laying hens were privately owned. Hog fattening is one of the most significant private production activities with more than 1 million participating families. Private producers are also increasingly keeping hares, pigeons and bees (9, 1/21/.81). Private farmers' share of production is especially high in these endeavors.

IV. INVESTMENTS AND INPUTS

The plan for 1981–85 calls for total investment of $27.6 billion to $28.1 billion in the socialized economy. This compares with $27.8 billion actually invested in 1976–80 (9, 12/12/80).[3] Enterprise profits, subsidies granted by the state, and bank credits are the sources for investments. The share of enterprise profits, as a source of investment gradually increased during 1976–80.

During 1976–80, the investment target for the whole economy was attained. The plan called for a 6-percent increase in agricultural investments. This was exceeded significantly since agricultural investments in 1976–80 were 15 percent higher than in 1971–75 in real terms. Investments peaked in all sectors of the economy in 1978, but declined in 1979, and even more sharply in 1980.

The general guideline for 1981–85 calls for maintaining the 1976–80 investment level, but for reduced investments in the first half of the 1981–85 plan period and a gradual increase in the second half. Priorities must be given to investment projects which either promote exports, or help to reduce imports, or reduce the use of raw materials (9, 12/12/80). Agriculture's share should be 12.5 to 13 percent of the total investments compared with a 12-percent share attained in 1976–80 (9, 2/18/81).

During 1981–85, the share of state subsidies will decline in the agricultural sector for construction, it will remain about the same as during 1976–80 for mechanization, and it will increase for soil improvement and new plantings of vineyards and orchards (9, 2/18/81). Price subsidies for fertilizer and plant protection agents will range from 21 to 50 percent, depending on the products (9, 11/12/80). Only dairy farms and hog producing enterprises are eligible for construction subsidies. Subsidies earmarked for soil improvement—Ft 1.1 billion—exceed by 30 percent the funds allocated for this purpose during 1976–80 (9, 2/18/81). The socialized enterprises projected an outlay of Ft 69 billion for purchasing machinery during 1981–85 compared with an actual expenditure of Ft 65 billion during 1976–80 (2, 2/2/81).

The level of planned outlays is unlikely to generate the planned output. If the planned increase in output is attained, the Government will be compelled to step up spending also for marketing facilities such as storage, rail cars, and trucks. Increased grain yields per hectare might also require larger capacity combines. To facilitate debt repayments and remedy infrastructural shortcomings, Hungary obtained a $600 million credit from the International Monetary Fund in 1982, and a $230 million World Bank loan in 1983 to be used for grain storage construction and machinery purchases, and a $109 million loan for energy conservation.

A. Agricultural Machinery

Hungary is a net importer of agricultural machinery and imports about one-half of the spare parts. Domestic factories provide about 44 percent of agricultural machinery and implements, while 45 percent is imported from members of CMEA, and 11 percent from the West (7, 7/8/79).

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[3] Converted from forints $1 = 37 forints.

Domestic production of agricultural machinery has increased dynamically since 1975, but no further growth is planned for 1981–85. The Raba factory, one of the leading Hungarian agricultural machine producers, purchased manufacturing licenses from the International Harvester Corporation. This factory, with the help of the licenses, introduced among a variety of machines a large 180 HP tractor with four wheel drive not produced previously in Hungary. Modernization during the current 5-year plan period should enhance the productivity of this factory and assure an important future role in machinery supply.

Since increase in machinery imports is not planned, the present share of domestic production will be maintained during 1981–85. The tractor inventory is likely to decrease 10 percent, with larger, more efficient machines replacing worn out, smaller tractors. The Government's aim is to secure adequate machine power to complete the sowing of any crop within 8 to 9 working days and to harvest wheat in 14 to 15 working days. Private farmers will be provided with the opportunity to purchase up to 30,000 motorized hoes and one-cylinder tractors (9, 1/21/81, 7/8/81).

Hungary, besides manufacturing agricultural machinery for domestic use, participates in specialized machine production for export such as fruit and vegetable harvesters and sprayers in conformity with agreements reached among the CMEA nations (12, 3/11/80).

The mechanization of harvest by 1980 reached 97 percent for small grains, 95 percent for sugar beets, 74 percent for corn and 36 percent for potatoes. During 1981–85, the mechanical harvesting of potatoes and sugar beets and the methods of hay cutting and baling will likely be upgraded and mechanization will become more widespread.

B. Chemicals

Fertilizer use per hectare of arable land—286 kg/ha. active ingredient (a.i.) in 1978—declined somewhat in the 3 following years, but peaked again at 288 kg. in 1982. It is difficult to attach any significance to the decline because of quality improvements. The share of compound fertilizer use increased from 18 percent in 1976 to 35 percent in 1980 (12, 2/22/79) (13). Also, a shift toward using liquid fertilizer is beginning. The shift is gradual and slow because of inadequate equipment for spraying and transporting and inadequate storage facilities (18, 3/17/73).

Fertilizer production increased 48 percent from 1976 to 1980. Domestic production covered all nitrogen consumed on farms and half the phosphate. The Pet nitrogen factory, enlarged during the last plan period, exports 40 percent of its production (2, 11/18/80). Accordingly, Hungary is a surplus producer of nitrogen fertilizer but imports natural gas, the basic raw material for producing fertilizers.

Use of plant protection agents, primarily imported from the West, exceeded 30,000 tons (a.i.) by 1980. Fertilizer and plant protection agents are applied partly from the air with the help of a fleet of 200 planes and 110 helicopters. Orchards, vineyards, and sugar beets in particular are sprayed from the air. Chemicals are used from the air on sunflower to assure simultaneous ripening (12, 4/19/79, 7/18/81).

The plan for 1981–85 does not spell out any fertilizer use target, but expects that both the use of fertilizers and plant protection agents will increase gradually (9, 12/12/80). In 1980, fertilizer use for wheat averaged 325 kg/ha. of a.i., with large variations among farms (9, 7/8/81). However, according to Mr. E. Zsuffa[4] a one-fourth to one-third increase in fertilizing application is needed to attain the planned yields (20).

In addition to increased quantities, correct fertilizer dosage based on soil tests and their even distribution with modern machinery could raise crop yields. The number of laboratories involved in soil testing increased in recent years since the Government made soil testing compulsory for every farm having at least 20 ha. contiguous area (11, 3/10/80). In recent years, more attention has been turned to the preservation and utilization of manure, induced probably by the higher cost of fertilizer production.

C. Irrigation

The expansion in construction of new irrigation facilities slowed down considerably since 1980. The share of state investment for maintaining aged irrigation systems has been reduced from 40 percent to 15 percent in 1981. Subsidies for establishing new irrigation facilities were halted, but credits for this purpose are available to enterprises at 4 percent interest. The cost of irrigation has been shifted from the State to the users. Since 1980, the farms have been paying full fee for water uses against 10 percent of the fee contributed in previous years.

Lack of state subsidies and inadequate enterprise funds caused a decline in irrigable area from 487,000 ha. in 1975 to 444,000 ha. by 1980 (12, 7/16/81). Relinquishing the goal to expand irrigation capacity represents a drastic deviation from earlier intentions. In 1973, the Government aimed at an extension of irrigation to 800,000 ha. by 1985 (12, 2/3/73). The change in target was probably influenced by the realization that on 50 percent of the irrigated area the operating costs surpassed the additional revenue obtained through increased production, and the enterprises left the equipment in disrepair (9, 2/18/81).

D. Energy

The higher price of energy has increased costs of production and forced the Government and farm managers to look into ways of curtailing expenditures through using energy more efficiently. Agriculture and the food industry are estimated to use 10 percent of Hungary's total energy (9, 2/18/81). In addition to trucks, tractors, and combines, drying of the new crops for example, uses considerable fuel. To save on drying costs, a new method of airtight storage of whole corn stalks, or stalks crushed with ears, is gaining popularity. Plants so preserved proved to have excellent feeding value for cattle. Storage of corn with high-moisture content is planned to increase to 2 million tons in coming years.

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[4] Deputy Chief of Economic Policy Department of the Communist Party.

The Government will subsidize with grants and credits the introduction of hydrocarbon substitutes. Two large state farms are using agricultural by-products and refuse for heating. By the end of 1985, at least 100 large farms plan to produce their own heating energy.

Research has been stepped up to find fuel saving technology, to produce more fuel efficient tractors for hauling several tilling implements simultaneously, and to introduce new energy sources (geothermal, solar, bio, and wind).

V. LABOR, INCOME, CONSUMPTION AND PRICES

A. Labor

The population growth rate was 0.4 percent per year in the seventies, among the lowest in Eastern Europe. Of the total work force of 5.2 million, including the members of cooperative farms and private farmers, one-fifth have been engaged in agricultural production in recent years. The agricultural work force was fairly stable during 1976–80 and no significant outflow is expected during 1981–85 because of the slow growth expected in other sectors of the economy. A slight decline in agricultural labor will likely be absorbed by services.

Agriculture has an adequate number of workers for the year-round routine tasks, but they cannot cope with peak harvest tasks. As in other East European countries, the military or students are called to help out for potato and sugar beet harvests.

The age distribution and the quality of agricultural workers improved in the seventies. The median age of cooperative members and of farm workers falls between the 30–39 years of age group, and approximately one-third of the physical laborers acquired some special skill.

B. Income

Most of the farms have been engaged in industrial, service, or marketing activities partly to supplement income earned from agriculture and partly to fully utilize the permanent labor force year round. The state farms pay wages and bonuses to the workers; the cooperatives provide a minimum retainer, bonuses, and an annual profit distribution. Wages on state farms increased 39 percent between 1975 and 1980, but during the same time the consumer price index rose 36 percent. Income growth of cooperative members was uneven with faster growth on prosperous farms. The difference in per capita income earned in the individual cooperatives is large. This income depends on the farm location, quality of soil, and ability of managers. The income of one-third of the cooperatives has been inadequate to cover the minimum retainer due to the members; thus, they receive state subsidies.

Farmworkers and members of the cooperatives are entitled to cultivate up to 0.6 ha. of land as a private plot and to own an unlimited number of livestock. Income from these private activities varies according to the extent of involvement.

Farmers may also engage in sharecropping. Sharecropping as a way to earn income was strengthened by a decree in 1981 which confirmed that any individual or group may make a contract with a large farm to cultivate land, keep livestock, or perform agricultural work such as harvesting in exchange for a share in output (8, 6/19/81). The 1981-85 plan emphasizes that earnings should be tied more to the type of work performed and results obtained than to the time spent.

The reduced Government subsidies to farms beginning in 1980 were only partially offset by procurement price increases, causing a decline in enterprise profits. The cooperative farms experiencing financial difficulties are provided with state help and credits from a mutual aid fund set up by the association of cooperatives. This fund was created with membership contribution and accumulated 889 million forints of capital by 1980 (14, 7/30/81).

C. Consumption

During 1976-80 domestic production provided Hungarian consumers with adequate selection of food which could be grown under the temperate Hungarian climate, and permitted a positive agricultural trade flow. Hungary has traditionally produced a surplus of grains, livestock products, fruits, and vegetables, but imported tropical fruits, coffee, cocoa, and tea.

The diet improved little in the last years because of a slowdown in growth of per capita real income and because retail food price increases were relatively higher than those for industrial consumer goods. As the result of change in price relationships between agricultural and industrial consumer goods, the share of disposable income spent for food increased by about 6 percent between 1975 and 1980. Manual laborers spent 43 percent of their disposable income for food, beverages, and tobacco in 1980, compared with 41 percent in 1975. By 1980, meat consumption at 71 kg. per capita remained below the planned 76 to 78 kg., and per capita vegetable and fruit consumption was 85.5 and 76 kg., respectively, instead of the planned 98 to 100 kg. of vegetable and 93 to 95 kg. of fruits (6). This slow change in the consumption pattern may continue through the eighties.

The plan for 1985 calls for an upgrading of food consumption with a diet of more animal protein and vitamins. But the goal for income is just to preserve the existing level of purchasing power. Despite the outlook for no growth of per capita income, some Hungarian economists project an annual increase of 0.7 percent in total food consumption, of which 1 to 2 percent will be in milk and poultry consumption (17). During the period of decelerated growth of national income in 1981-85, the distribution of national income between consumption and investment will be allowed to increase to 82:18 from 76:24 in 1976-80 (6).

D. Prices

Hungary has a complicated price system; some prices are fixed, some are allowed to fluctuate between a minimum and maximum level, and some are free. The pricing policy in effect was established in 1968 with the objective of gradually including more products in the free price category. The administered prices are formed on the basis of production costs, supply and demand, and state preferences. Prices for staple foods, such as bread, meat, and sugar, are fixed and subsidized, while perishable food prices—those for fruits and vegetables—are market determined. The inclusion of new items in the free price category was negligible during the seventies because economic or political conditions apparently were not favorable for expanding the number of goods in this price category.

In recent years, domestic price setting of commodities in the fixed priced category has been more and more influenced by international market prices. This policy resulted in a selective rise in prices and consequently in some change in consumer demand in line with the price shifts.

Import prices will have a stronger impact on domestic prices. Exemptions from foreign price fluctuations, however, will be maintained for some products and services when deemed justified by socio-political consideration. International price changes influenced the Government to raise meat prices twice during 1976–80, once in 1976 and again in 1980. Bread and flour prices, previously untouched, were raised in 1982 and again in 1983. The average level of consumer prices are projected to increase 4.5 to 5 percent annually during 1981–85 (6).

VI. Agricultural Trade

Foreign trade is very significant in the Hungarian economy; both per capita exports and imports are the largest among the CMEA members. Deteriorating terms of trade have caused negative trade balances since 1973. Based on Hungarian calculations, export prices rose 2.3 times, while import prices rose 6.6 times between 1973 and 1980. For several years, financing the imports with foreign credits helped to cushion the adverse economic impact on living standard. The trade deficit peaked in 1978 at $1.6 billion (table 7). Since then, stringent measures have restrained domestic consumption and imports and stimulated exports. Consequently, the negative trade balance gradually declined in 1979 and 1980 (15). By 1980, the hard currency trade was nearly balanced, though trade balance on the ruble account remained negative. Because the annual intra-CMEA trade prices are based on preceding 5-year moving average world prices, the full effect of the 1979 oil price increase will be felt in 1985, forcing Hungary to further increase exports.

TABLE 7.—HUNGARY: TOTAL AND AGRICULTURAL TRADE

[In millions of dollars]

Year	Total trade [1]			Agricultural trade [2]		
	Exports	Imports	Balance	Exports	Imports	Balance
1976	4,934	5,528	−594	1,453	937	516
1977	5,832	6,523	−691	1,749	1,155	594
1978	6,345	7,902	−1,557	1,785	1,170	615
1979	7,938	8,674	−736	2,102	1,211	891
1980	8,677	9,235	−558	1,990	1,101	889

TABLE 7.—HUNGARY: TOTAL AND AGRICULTURAL TRADE—Continued

[In millions of dollars]

Year	Total trade[1]			Agricultural trade[2]		
	Exports	Imports	Balance	Exports	Imports	Balance
1981	8,712	9,128	−416	2,248	1,037	1,211
1982[3]	8,539	8,549	−10	2,234	847	1,387

[1] United Nations data.

[2] Food and Agriculture Organization of the United Nations data.

[3] Hungarian Foreign Trade Yearbook data.

Agriculture's share averaged 24.5 percent of total exports and 12.5 percent of total imports annually during 1979–81. Agriculture has annually contributed a surplus to an otherwise negative trade balance. Over one-third of the agricultural output and almost two-thirds of products processed by the food industry are exported (9, 12/19/80). Animals for slaughter and livestock products account for more than one-third of the total agricultural exports. Canned fruits and vegetables, grain, wine, fresh apples, and sunflower oil are other important export commodities.

The USSR is Hungary's principal export market for agricultural products. Hungary has a 5-year agreement with the Soviet Union for grain and meat exports and a 10-year agreement lasting until 1990 for the exports of canned fruits and vegetables and wine (9, 2/18/81). Following the USSR, the GDR and Czechoslovakia are the leading markets for Hungarian grain; several European countries provide markets for raw meat. The USSR, the Middle East, and Western Europe are the principal destinations for poultry; the USSR, the Middle East, and Italy for cattle for slaughter; the USSR for hogs for slaughter; Italy and the Middle East for sheep for slaughter; the USSR and the United States for canned meat.

Hungary in 1982 devaluated its forint and allowed a limited convertibility in hard currencies with floating rates quoted weekly. This step made the Hungarian forint acceptable in world trade and may influence Hungarian managers to adjust production better on the basis of demand in western markets.

The outlook for expanding live cattle, hog, and poultry exports is not promising. The prospect for exports of grain, vegetables, fruits, wine, and vegetable oil is much better. From time to time, experts in Hungary debate the higher profitability of grain versus livestock product exports. The dispute is academic, however, because livestock products are too important as hard currency earners, and meat processing provides livelihood to laborers in the food industry. Reduced livestock production because of slack foreign or domestic demand would cause serious labor dislocation and unused manufacturing capacity.

The goals for 1981–85—as stated by the Minister of Agriculture, J. Vancsa—include a one-third increase in agricultural exports including a two-fifths increase in hard currency sales. The Minister expects an increase primarily in grain, meat, and vegetable oil exports (9, 2/18/81).

Hungary must restrain its agricultural imports because of budgetary considerations. The imports are mostly complementary products not grown under temperate climate, such as cotton, coffee, tea, cocoa, and citrus fruits. Soybean meal is the most important supplementary product. Hungary so far has been unsuccessful in increasing soybean yield to a level competitive with grains or sunflower. Cattle hides are another important supplementary import. The large live cattle exports, because of inadequate meat processing facilities, deprive Hungary of hides much needed by the leather industry.

The average agricultural imports from the United States were $37 million annually in 1976-80, of which $23 million was soybean meal. In the same period, agricultural exports to the United States averaged $29 million. Hungary, however, in 1981 and 1982 did not buy soybean meal from the United States. It resumed purchases in 1983, when Hungary made use of Commodity Credit Corporation (CCC) credit guarantees.

Hungary may enjoy a grain surplus of 800,000 tons by 1985 and 900,000 tons by 1990. These volumes compare with a net export of an average 750,000 tons annually during 1976-80 (4). A protein meal deficiency, however, of over 700,000 tons will persist. The annual meat and meat product exports—285,000 tons average during 1976-80—may increase slightly, depending on how much of the projected 1 percent annual average increase of meat production will be used for domestic consumption. The exports are unlikely to exceed annually the increment in production of about 15,000 tons. Exports of milk and milk products are not profitable; except for a small amount of cheese, no exports are planned for 1981-85 (9, 12/19/80). The Hungarians hope to increase gradually to the United States the exports of canned ham, wine, paprika, and honey.

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POLAND

THE ECONOMIC CRISIS IN POLAND AND PROSPECTS FOR RECOVERY

By Zbigniew M. Fallenbuchl*

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1. COMPLEX NATURE OF THE CRISIS

There are still many misconceptions about the nature and causes of the present economic crisis in Poland. It was not caused by strikes and labour unrests, or by unfavourable external conditions, or by corruption and mistakes of this or that group of leaders in a particular period. Strikes and labour unrests were not a cause but the result of the rapidly deteriorating economic situation. External conditions, corruption and mistakes of leaders played some role, but they were not the most important reason. There is, indeed, no simple explanation and no single factor could have been responsible for a crisis of such truly catastrophic dimensions and, although economic difficulties in other East European countries and in the Soviet Union itself have many similar features, the crisis there has not assumed the same proportions as in Poland.

According to the official statistics, the Domestic Net Material Product (DNMP or the "Produced National Income" in the marxist terminology, which is the value of material goods and a few "productive" services produced within the country) declined by 24% between 1978, the last year for which these statistics still reported growth, and 1982, when they reached the lowest level. During the same period the National Net Material Product (NNMP or the "Allocated National Income" which is DNMP less exports and plus imports) declined by 28% and on a per capital basis by 30%. In 1982 alone retail prices increased by 101%. Despite compensations, real disposable incomes of the population declined by 30% and real wage by 25%.[1] However, when there are drastic shortages of goods and services, a decline in the ratio of changes in nominal personal incomes to changes in prices does not reflect the effective reduction in the standard of living as a part of income cannot be spent on anything and represents unvoluntary saving. Neither the real scarcity nor a rapidly progressing deterioration in the quality of products is reflected in the controlled prices.[2]

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A decline of this dimension can only be explained by the fact that the crisis is composed of several overimposed elements. It is an outcome of a combination of some basic malfunctioning of the economic system and of the long-run consequences of a number of wrong decisions which were made at different points of time by various leaders: the stalinists in the 1950's, Gomulka and his planners in the 1960's, Gierek's equipe in the 1970's as well as Kania and, subsequently, Jaruzelski and his group since August 1980. Although these decisions were either induced or, at least made possible by certain aspects of the system, their consequences form a unique combination.

2. Deep-Rooted Long-Run Systemic and Structural Problems

The roots of the crisis go back to the late 1940's and the beginning of the 1950's when the highly centralized stalinist system of planning and management was transplanted without any significant modification and the Soviet-type policy of industrialization was applied in a country which differs from the Soviet Union as to its size, factor endowment, culture and historical traditions. At the same time an abrupt geographic redistribution of international economic relations was enforced and traditional links with the world economy were cut. The interaction of the system, of the strategy and of the special nature of international economic relations within the CMEA region resulted in a specific pattern of development and a certain industrial structure was created. According to the current Soviet and East European terminology this was an "extensive pattern of development". The rates of growth of national product depend mainly on increases in the quantity of labour, capital and other inputs and not on increases in their productivity. The industrial structure was gearded to this pattern.

The Soviet-type system makes it possible for the planners to ignore market forces and to build new enterprises and entire industries in accordance with their own preferences, whatever the short-run or even the long-run profitability of these investment projects.[3]

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[1] G.U.S., Maly rocznik statystyczny 1983 (The Concise Statistical Yearbook 1983), Warsaw 1983, pp. 58–60, 97.

[2] K. Ryc, "Czy place gonia ceny?" (Do Wages Follow Prices?), zycie gospodarcze, No. 42, 1983, p. 10.

[3] The author has discussed the system in Z. M. Fallenbuchl, "How Does the Soviet Economy Function Without a Free Market?", Queen's Quarterly, v. LXX, No. 4, 1963, pp. 559–75, reprinted in M. Bornstein and D. R. Fusfeld (eds.), "The Soviet Economy: A Book of Readings," Homewood: Irwin, rev. ed., 1966, pp. 34–66; 3rd ed., 1970, pp. 24–36; 4th ed., 1974, pp. 3–16; and in an abbreviated version in R. T. Gill, "Economics: A Text with Included Readings," Pacific Palisades: Goodyear, 1973, pp. 80–84.

However, because the system eliminates the signals which the market usually provides, even when often they are far from being perfect in real life, the planners have no guidance as to what industrial structure they should construct and the order in which various industries, or stages of production, should be developed. This is particularly true when the economy is insulated from foreign competition and has no links with the top producers through some form of direct investment, industrial cooperation or other arrangements for technology transfer.

During the industrialization drive in Poland in the 1950's the planners attempted to create on industrial structure which they at that time regarded as the most progressive and conducive to growth. Acting in accordance with the Soviet-type development strategy, they imitated the Soviet industrial structure. The stress was on coal mining, the iron and steel metallurgy, heavy machinery and metal constructions and on the so called "heavy" chemical industry. All "modern" branches, such as electronics, synthetic fibres, plastics and other sections of the petrochemical industry were neglected, together with agriculture, infrastructure and the production of all consumption goods industries. Almost all newly established, or rapidly expanded, industries were heavily capital-, energy- and material-intensive.[4]

A relatively minor role was assigned to international trade, except for coal exports. The strategy was inward looking. It ignored comparative advantages and was based mainly on import substitution, modified only by the needs of the Soviet Union, mainly coal, steel, railway rolling stock, ships, heavy machines and equipment, all very capital-, energy- and material-intensive. With these exceptions, a basically closed economy was established. It was producing a very large number of manufactured consumption and, above all, producer goods, on a small scale, at a high unit cost, with a relatively backward technology and low quality, as it was impossible to expand research and development in all these fields to a significant extent.

No viable export sector was created and many traditional foreign markets were lost, as they were supplied by the low priority sectors in which even decapitalization took place in the early 1950's. When the growth induced the import of raw materials, intermediate goods, machines and parts, prolonged balance-of-payments difficulties appeared. They were suppressed but not eliminated by direct administrative controls.[5]

Although the same strategy was followed and the same system was established in all other East European countries at that time, in Poland the role of international trade was more severely restricted than in other CMEA countries, except the Soviet Union, and, perhaps because the country was bigger than others in Eastern Europe and had large quantities of coal available, the imitation of the Soviet industrial structure with its stress on heavy industry was greater.[6]

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[4] The author has discussed the Soviet-type investment policy and its long-run consequences in Z. M. Fallenbuchl, "Investment Policy for Economic Development: Some Lessons of the Communist Experience," The Canadian Journal of Economics and Political Science, v. XXIX, No. 1, 1963, pp. 26–39; Z. M. Fallenbuchl, "Soviet Investment Planning", Business Quarterly, v. 28, No. 2, 1963, pp. 31–38; Z. M. Fallenbuchl, "Some Structural Aspects of Soviet-type Investment Policy", Soviet Studies, v. XVI, No. 4, 1965, pp. 432–447; and Z. M. Fallenbuchl, "The Communist Pattern of Industrialization," Soviet Studies, v. XXI, No. 4, 1970, pp. 451–478.

[5] The author has discussed this point more fully in Z. M. Fallenbuchl, "Policy Alternatives in Polish Foreign Economic Relations," in M. D. Simon and R. E. Kanet (eds.), "Background to Crisis: Policy and Politics in Gierek's Poland," Boulder: Westview Press, 1981, pp. 329–369.

Serious difficulties appeared already in 1954–56. They resulted in workers' riots in Poznan and in the first enforced change of the party leadership. Some systemic modifications were introduced, the most import of which was the decollectivization of agriculture. There was, however, no change in the development strategy and, in order not to waste investment which had already been started, the industrial structure was completed with only minor corrections. Difficulties occurred again when, after a short period of liberalization, a slowdown in the rates of growth, readjustment and the use of western credits to improve the standard of living that had declined during the Six Year Plan period (1950–55), a new investment drive was forced upon the economy at the beginning of the 1960's. A period of stagnation followed for the rest of the decade. An attempt was made by Gomulka to restructure the economy. His "selective growth strategy", introduced in 1968, was supposed to result in a more specialized industrial structure which would be more suitable for taking advantage of international specialization, mainly within CMEA region. Decisions about specialization were, however, made "from above" by the central planners and the envisaged improvement in the industrial structure was to be made again in the way in which the then existing structure has been constructed. A new investment drive was financed by another increase in the forced domestic saving. It ended in workers' riots and another enforced change in the party and government leaders in December 1970.[7]

This deep-rooted crisis, directly related to the operation of the system, the adopted strategy and the redirection of international economic relations with its extensive pattern of development and inefficient economic structure, was postponed but one averted by the so called "new development strategy" that was introduced in the early 1970's. It is basically of the same nature as that that faces the Soviet Union and the result of Eastern Europe. But this is only one element of the present crisis in Poland.

3. LEGACY OF GIEREK'S "NEW DEVELOPMENT STRATEGY"

As it often happens with a postponed crisis, when its full impact appeared after the delay of several years, its force was even stronger that it would, most likely, have been otherwise. The postonment of the crisis and Gierek's attempts to cope with it, created deep internal and external disequilibria, new structural maladjustments and mounting indebtedness. These effects were now overimposed on the long-run systemic and structural problems which were not eliminated by those attempts.

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[6] For more details see Z. M. Fallenbuchl, "Industrial Structure and the Intensive Pattern of Development in Poland," Jahrbuch der Wirtschaft Osteuropa, v. 4, 1973, pp. 233–254.

[7] For more details see Z. M. Fallenbuchl, "The Strategy of Development and Gierek's Economic Manoeuvre," in A. Bromke and J. W. Strong (eds.), Gierek's Poland, New York: Praeger, 1973, pp. 52–70.

The so-called "new development strategy" was introduced at the beginning of the 1970's in order to effect a switch from the old extensive pattern of development to an intensive one, i.e., to make the rates of growth to depend more on improvements in productivity than on increases in the quantity of inputs. This objective was to be achieved with the help of Western credits as only in this way it was possible to increase simultaneously investment, necessary for restructuring and modernization and consumption which was needed to create material incentives. Détente, bankers' holdings of liquid funds and exporters' readiness to advance credits made this strategy possible.[8]

The planners expected that the import of capital and technology from the West would expand the production of modern, efficiently produced manufactured goods which could be exported to earn hard currencies needed for the repayment of the loans. However, many investment decisions were in practice dominated by the import substitution rather than by export considerations and the selection of potential exports was made "from above" by the central planners who had insufficient information as to the prevailing conditions in the foreign markets and real productive capacities in the domestic production enterprises. Some projects were presented to the planners as "self-financing in foreign exchange" in order to be included in the plan and to obtain foreign exchange for the import of machines. Others were accepted by the planners as the result of a pressure by various vested interests grouped either in the industrial ministries or regional authorities. Apparently, the decisive factor was often the "penetration strength" of a particular manager which depended on his political or personal connection.[9] The rigidity of the system, price and cost distortions, the purely arbitrary, overvaluated rate of exchange, a very high rate of domestic absorption, insufficient incentives, and even disincentives for production for export, created additional obstacles for the expansion of exports to the difficult Western markets.[10]

The ambitious investment program (see Table I) exceeded the capacity of construction and installation units. The gestation period of investment became longer, the proportion of unfinished projects very large, and capital-output ratio increased. The inflow of imported capital and technology could not be absorbed by the economy in the short-run. The situation was aggrevated by mistakes which were made in the choice of investment variants and in connection with the purchases of foreign licenses and with other forms of embodied and disembodied transfer of technology.[11] In effect, the investment drive did not reduce but, on the contrary, it even further increased the energy-, material-, and import-intensity of the economy.[12]

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[8] The author has discussed the "new development strategy" and mistakes in its implementation in Z. M. Fallenbuchl, "The Polish Economy in the 1970's," Joint Economic Committee, U.S. Congress, East European Economies Post-Helsinki, Washington, D.C.: U.S. Government Printing Office, pp. 816–864.

[9] J. Wierzbolowski, "Decydenci czy system podejmowania decyzji?" (Decision-makers or a Decision-Making System?), Handel zagraniczny, No. 4, 1981, pp. 11–14.

[10] "Import dla eksportu" (Import for the Expansion of Export), Handel zagraniczny, No. 8–9, 1981, pp. 12–16.

[11] For details see Z. M. Fallenbuchl, "East-West Technology Transfer—Study of Poland, 1971–1980," Paris: OECD, 1983.

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[12] J. Macieja, "Obnizenie materialochlonnosci i energochlonnosci produkcji strategicznym zadeniem gospodarki w latach osiemdzie—siatych" (Reduction of the Material—and Energy-Intensity of Production is the Strategic Task for the Economy in the 1980's), Gospodarka planowa, No. 9, 1979, pp. 432-434; S. Gruzewski, "Zrodla zadluzenia zagranicznego i jego autorzy" (Sources of Foreign Indebredness and Those Responsible For It), Handel zagraniczny, No. 11, 1980, pp. 3-7.

TABLE I.—RATES OF GROWTH OF NET MATERIAL PRODUCT

[Official data]

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1978–82
Domestic net material product:															
Total	8.1	10.6	10.8	10.4	9.0	6.8	5.0	3.0	−2.3	−6.0	−12.0	−5.5	6.0	5.0	−23.6
Producted in industry	8.5	10.4	11.6	12.0	11.4	9.1	7.6	2.7	−1.7	−4.1	−14.6	−4.5	5.8	5.3	−23.1
Produced in agriculture	8.3	5.4	3.4	−2.9	−8.1	2.0	0.2	7.3	−5.6	−15.5	1.4	4.9	5.1	[1] 5.7	−15.2
National net material product:															
Total	9.8	12.5	14.3	12.0	9.5	6.5	2.2	0.5	−3.7	−6.0	−10.5	−10.5	5.4	5.0	−27.5
Total consumption	7.7	9.1	8.1	7.4	11.1	8.8	6.8	1.7	3.1	2.1	−4.6	−11.5	5.6	5.0	−11.1
Consumption from personal incomes	7.0	8.8	8.5	6.8	11.3	8.7	6.6	1.0	3.2	2.3	−4.1	−14.6	6.7	5.0	−13.5
Net fixed capital investment	10.3	27.5	27.3	22.6	16.5	−4.0	0.2	−9.2	−24.7	−36.5	−30.7	−30.1	12.0	6.0	−76.8
NNMP–DNMP/DNMP (percent)	−1.6	0.2	3.4	4.8	7.7					3.1	2.6	−1.4	−1.7	NA	

[1] Gross agricultural production.

Sources: G.U.S., Rocznik statystyczny 1982 (Statistical Yearbook 1982), Warsaw 1982, pp. 38, 75, 76; G.U.S., Rocznik dochodu narodowego 1982 (National Income Yearbook 1982), Warsaw 1982; Zycie gospodarcze, No. 8, 1983, p. 8; No. 20, 1983 pp. 9–10; No. 44, 1983, pp. 9, 10. Handel zegraniczny, No. 7/8, 1983, p. 4. G.U.S., Rocjnik statystyczny 1984 (Statistical Yearbook 1984), Warsaw 1984, p. 73; Rzeczpospolita, Feb. 4, 1985.

During the period 1971–80 the total value of long- and medium-term credits received by Poland from the West amounted to $38.6 billion—gross of repayments and, therefore, greater than the total level of indebtedness at the end of that period (see Table III). Out of this total $8.3 billion was received in 1971–75 and $30.3 billion in 1976–80. During the earlier period about 53% of all credits were used to finance investment and 33% to finance the import of raw materials, parts and other intermediate goods. In 1976–80 only 27% of credits were used to finance investment and about 60% were needed to finance the import of raw materials and intermediate goods for which the demand increased as the result of the completion of new investment projects.[13]

The attempts to open the Polish economy coincided with the oil crisis and serious disturbances in the world economy. As an important exporter of coal Poland had, however, positive changes in terms of trade during the period 1971–76 in all years, except 1973 and 1974 (see Table II). The external and internal disequilibria which appeared at that time were mainly created by domestic policies, although the way in which the planners attempted to insulate the economy from the impact of world-wide inflation with the help of the price equalization subsidies drastically increased price distortion, reduced efficiency and created, therefore, additional difficulties for the expansion of exports to the West during the recession.[14] Moreover, because of "the lack of knowledge of, or a tendency to ignore, processes which were taking place in the world economy" [15] no attempt was made to make the necessary adjustment. For example, in response to the oil crisis the production of coal was expanded and the price of oil products was somewhat raised, but the enterprises were either allowed to make corresponding raises in the prices of the final products or were given subsidies to cover the increase in the price of oil. There was no preference for energy saving technologies when new investment projects were selected and the plans for the expansion of the automotive industry were not reexamined.

TABLE II.—DOMESTIC NET MATERIAL PRODUCT, IMPORT AND EXPORT IN CONSTANT PRICES AND TERMS OF TRADE

[Rates of growth]

Year	DNMP		Import			Export			Terms of trade total
	Total	Industry	Total	Socialist countries	Other countries	Total	Socialist countries	Other countries	
1971	8.1	8.5	13.8	10.3	20.7	6.5	6.9	4.9	4.3
1972	10.6	10.4	22.1	10.1	46.6	15.2	15.9	14.8	1.8
1973	10.8	11.6	22.6	12.7	37.8	11.0	12.0	10.9	−2.9
1974	10.4	12.0	14.6	11.1	19.2	12.8	16.0	5.9	−.5
1975	9.0	11.4	5.0	−2.1	12.2	8.3	9.6	5.8	3.2

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[13] A. Lubowski, "Gdzie sie podzialy te miliardy?" (What Happened to Those Billions?) Zycie gospodarcze, No. 18, 1981, p.2.

[14] Z.M. Fallenbuchl, "The Impact of External Economic Disturbances on Poland Since 1971", in E. Neuberger and L. D'Andrea Tyson (eds.), "The Impact of International Economic Disturbances on the Soviet Union and Eastern Europe," New York: Pergamon, 1980, pp. 280-304.

[15] J. Swierkocki, "Handel zagraniczny w polityce gospodarczej w latach siedemdziesiatych-zalozenia i realizacja" (The Role of Foreign Trade in the Economic Policy During the Seventies—Plans and Implementation), Handel zagraniczny, No. 5-6, 1962, pp. 9-14.

TABLE II.—DOMESTIC NET MATERIAL PRODUCT, IMPORT AND EXPORT IN CONSTANT PRICES AND TERMS OF TRADE—Continued

[Rates of growth]

Year	DNMP		Import			Export			Terms of trade total
	Total	Industry	Total	Socialist countries	Other countries	Total	Socialist countries	Other countries	
1976	6.8	9.3	10.3	7.8	11.4	5.4	−.3	12.8	2.0
1977	5.0	7.7	.4	12.3	−10.9	8.8	10.6	4.0	−2.3
1978	3.0	2.5	1.5	4.0	−2.0	5.7	7.5	2.9	0
1979	−2.3	−1.7	−1.2	1.7	−4.5	6.8	9.6	2.1	−2.5
1980	−6.0	−4.1	−1.9	2.4	−7.2	−4.2	−9.5	5.0	−4.1
1981	−12.1	−16.0	−16.9	−6.3	−31.5	−19.0	−17.0	−22.1	−6.8
1982	−5.5	−4.5	−13.7	−5.6	−24.2	8.7	16.6	0.9	−0.8
1983	6.0	5.8	5.2	4.4	6.6	10.3	8.3	12.4	−4.0
1984	5.0	5.3	9.0	5.9	13.2	9.0	5.5	12.4	−0.6

Sources: G.U.S., Rocznik statystyczny 1982, Warsaw, 1982, p. 307; G.U.S., Rocznik statystyczny handlu zagranicznego 1981, Warsaw, 1981, p.5. Życie gospodarcze, No. 44, 1983, p. 8, No. 51/52, 1983, p. 13; Rzeczpospolita, Feb. 4, 1985.

At the same time the planners lost control over increases in investment outlays, expenditures on consumption and imports and their rates of growth because unrealistically high (see Tables I–III). Trade deficit exceeded the planned dimensions.[16] It made the increases in investment and consumption possible, as the difference between the NNMP and DNMP represents the ability to allocate to the main uses more resources than the volume that the economy produces within a given period. The growth of indebtedness became, however, very rapid (see Table III) and net interest payments started to create a heavy burden for the current account of the balance of payments (see Table IV).

TABLE III.—FOREIGN TRADE (CURRENT PRICES, F.O.B., VISIBLE TRADE ONLY) AND LONG- AND MEDIUM-TERM INDEBTEDNESS

	1971	1972	1973	1974	1975	1976
	Million Deviza Zloty–Foreign Trade Prices					
Total trade:						
Export	15,489.3	18,132.7	21,355.1	27,624.8	34,160.7	36,600.3
Import	16,150.7	19,612.4	26,102.8	34,822.9	41.650.7	46,070.9
Balance	−661.4	−1,479.7	−4,747.7	−7,198.1	−7,490.0	−9,470.6
Balance as percent of import	−4.1	−7.5	−18.2	−20.7	−18.0	−20.6
Trade with socialist countries:						
Export	9,770.2	11,524.7	12,959.6	15,396.4	20,472.2	21,853.1
Import	10,882.8	12,003.7	13,485.7	15,468.3	19,086.9	21,587.5
Balance	−1,112.6	−479.0	−526.3	−71.9	+1,385.3	+265.6
Balance as percent of import	−10.2	−4.0	−3.9	−0.5	+7.3	+1.2
Trade with other countries:						
Export	5,719.1	6,608.0	8,395.5	12,228.4	13,688.5	14,747.2
Import	5,267.2	7,608.7	12,616.9	19,354.6	22,563.8	24,483.4
Balance	+451.1	−1,000.7	−4,221.4	−7,126.2	−8,875.3	−9,736.2
Balance as percent of import	+8.6	−13.2	−33.5	−36.8	−39.3	−39.8

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[16] S. Albinowski, "U zrodel zalamania gospodarczego" (Sources of the Economic Crisis), **Gospodarka planowa**, No. 7-8, 1981, pp. 353-361.

TABLE III.—FOREIGN TRADE (CURRENT PRICES, F.O.B., VISIBLE TRADE ONLY) AND LONG- AND MEDIUM-TERM INDEBTEDNESS—Continued

	1971	1972	1973	1974	1975	1976
			Billion Deviza Zloty			
Indebtedness (long and medium term):						
Socialist countries	2.2	1.9	1.1	0.4	1.9	0.8
Other countries	3.9	4.6	8.5	14.6	27.8	33.8
			Billion U.S. Dollars			
Hard currency indebtedness:						
Debt	1.2	1.5	2.8	4.8	7.6	11.2
Payments due	.4	.4	.5	1.0	1.5	2.1

	1977	1978	1979	1980	1981
			Million Deviza Zloty—Foreign Trade Prices		
Total trade:					
Export	48,558.4	44,685.0	50,192.0	51,908.3	44,530
Import	40,747.8	50,938.4	54,317.3	58.298.6	52,013
Balance	−7,810.6	−6,253.4	−4,125.3	−6,390.3	−7,483
Balance as percent of import	−19.2	−12.3	−7.6	−11.0	−14.4
Trade with socialist countries:					
Export	24,551.9	27,309.6	30,576.5	29,016.8	26,226
Import	25,206.3	27,578.9	29,489.5	32,408.9	33,794
Balance	−654.4	−269.3	+1,087.0	−3,392.1	−7,568
Balance as percent import	−2.6	−1.0	+3.7	−10.5	−22.4
Trade with other countries:					
Export	16,195.9	17,375.4	19,615.5	22,891.5	18,304
Import	23,352.1	23,359.5	24,827.8	25,889.7	18,219
Balance	−7,156.2	−5,984.1	−5,212.3	−2,998.2	+85
Balance as percent of import	−30.6	−25.6	−21.0	−11.6	+0.5
			Billion Deviza Zloty		
Indebtedness (long and medium term):					
Socialist countries	3.7	3.5	2.8	6.4	13.9
Other countries	43.0	59.0	62.6	76.6	88.0
			Billion U.S. Dollars		
Hard currency indebtedness:					
Debt	14.3	16.9	23.1	22.8	24.3
Payments due	3.1	4.5	6.3	5.0	5.0

	1980	1981	1982	1983	1984
			Billion Zloty—Domestic		
Total trade:					
Export	986.6	846.2	951.1	1,600.2	1,334.1
Import	1,079.4	963.4	868.9	970.2	1,211.0
Balance	−92.8	−117.2	+82.2	+90.0	+123.1
Balance as percent of import	−8.6	−12.2	+9.5	+9.3	+10.2
Trade with socialist countries:					
Export	415.5	384.5	464.1	520.6	615.4
Import	442.7	494.0	503.4	562.4	662.9
Balance	−27.2	−107.5	−39.3	−41.8	−47.5

	1980	1981	1982	1983	1984
Balance as percent of import	−6.1	−21.8	−7.8	−7.4	−7.2
Trade with other countries:					
Export	571.1	461.7	487.0	539.6	718.7
Import	636.7	469.4	365.5	407.8	548.1
Balance	−65.6	−7.7	+121.5	+131.8	−170.6
Balance as percent of import	−10.3	−1.6	+33.2	+32.3	+31.1
	Billion Zloty				
Indebtedness (long and medium term):					
Socialist countries	NA	NA	254.8	261.4	348
Other countries	NA	NA	2,147.4	2,596.5	3,384
	Billion U.S. Dollars				
Hard currency indebtedness:					
Debt			24.8	26.4	26.8
Payment due			5.5	1.3	NA

N.B. "Deviza zloty" was abolished as from January 1, 1982. From that date foreign trade is reported in domestic zloty at domestic prices. Because of payments for transit and other services the current account with socialist countries is balanced with a negative balance of visible trade.

[1] Some hard currency debts are in currencies other than U.S. dollars—their value declined when the value of the dollar appreciated.

Sources: G.U.S., Rocznik statystyczny handlu zagranicznego 1984 (Statistical Yearbook of Foreign Trade 1984), Warsaw 1981, pp. 3–4; G.U.S., Rocznik statystyczny 1984 (Statistical Yearbook 1982), Warsaw 1982, p. 311, 456. Zycie gospodarcze, No. 18, 1981, p. 2; No. 28, 1981, p. 9; No. 21, 1983, p. 9; No. 29, 1983, p. 8; Finanse, No. 6, 1982, pp. 62, 64; Rzadowy raport o stanie gospodarki (Government Report on the State of the Economy), Warsaw, July 1981, p. 124; Rzeczpospolita, Feb. 4, 1985.

TABLE IV.—BALANCE ON CURRENT ACCOUNT OF THE BALANCE OF PAYMENTS WITH NON-SOCIALIST COUNTRIES

[Billions U.S. dollars, current prices]

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Export of goods and services	2.3	2.6	3.4	5.1	5.7	6.1	6.8	7.4	8.4	9.8	7.42	5.88	7.2
Import of goods and services	2.0	2.7	4.8	7.2	8.7	8.9	8.6	8.9	10.3	10.2	7.37	5.12	5.6
Balance	.3	−.1	−1.4	−2.1	−3.0	−2.8	−1.8	−1.5	−1.9	−0.4	0.05	0.76	1.6
Net interest payments	−.0	−.0	−.1	−.3	−.5	−.6	−.9	−1.1	−1.6	−2.4	−2.10	−1.78	−1.5
Balance on current account	.3	−.1	−1.5	−2.4	−3.5	−3.4	−2.7	−2.6	−3.5	−2.8	−2.05	−1.02	−0.1

[1] Visible trade only.,

[2] Balance of visible trade +0.70 plus balance on services and transfer +340.

Sources: Rzadowy raport o stanie gospodarki (Government Report on the State of the Economy), Warsaw 1981, p. 124; Finanse, No. 1, 1983. G.U.S., Rocznik statystyczny handleu zagranicznego 1984 (Statistical Yearbook).

The "new development strategy" was basically a sound policy, but during its implementation too many mistakes were made.[17] The most important reason for its failure was the lack of adjustment of the system of planning and management to the strategy which was too difficult to implement with the inflexible, overcentralized system based on administrative commands. It was the system that made possible all those mistakes in macroeconomic policy, in the choice of investment and potential exports, reduced the benefits from technology transfer and was, at the least partly, responsible for the inability to expand profitable exports to the West.[18]

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[17] Mistakes made by Gierek's equipe in the first half of the 1970's have been widely criticized in Poland. See, for example, J. Pajestka, Polski kryzys lat 1980–1981 (The Polish Crisis of 1980–1981), Warsaw 1981; Z. Mikolajczyk, "Nad problemami gospodarki lat siedemdziesiatych" (On the Problems of the Economy in the Seventies), Zycie gospodarcze, No. 40, 1980, pp. 3, 4.

Gierek's strategy did not result in a switch to a more intensive pattern of development. On the contrary, the pattern became even more extensive (see Table V). It left a large number of unfinished investments, greatly expanded productive capacities in industries producing producer goods and insufficient productive capacities in industries producing consumption goods, in electrical power generation and in transport, a serious agricultural crisis, inflated nominal incomes, shortages of consumption goods, strong inflationary pressures, increased dependence on imports, especially from the West, no expansion in the export capacity and rapidly growing indebtedness.[19]

TABLE V.—RATES OF GROWTH OF EMPLOYMENT, FIXED CAPITAL STOCK, AND RATIOS IN THE MATERIAL SPHERE OF PRODUCTION

[Constant prices, percentages]

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Employment	1.2	2.3	2.2	2.8	1.4	−0.8	0	−0.3	−0.8	−1.6	−0.2	−3.2	−0.2
Gross fixed capital	6.2	6.5	7.6	9.3	10.2	9.8	9.6	8.8	7.6	6.1	3.5	1.8	2.6
DNMP/employee	6.8	8.1	8.4	7.4	7.5	7.7	5.0	3.3	−1.5	−4.5	−11.9	−2.2	6.1
DNMP/gross fixed capital	1.8	3.8	3.0	1.0	−1.1	−2.7	−4.2	−5.3	−9.2	−11.4	−14.7	−24.1	9.1
Gross fixed capital/employee	4.9	4.2	5.3	6.3	8.6	10.7	9.6	9.1	8.5	7.8	3.7	22.1	2.7
DNMP/employee—Gross fixed capital/employee	1.9	3.9	3.1	1.1	−1.1	−3.0	−4.6	−5.8	−10.0	−12.3	−15.6	−24.3	3.4

Sources: G.U.S., Rocznik dochodu narodowego 1976 (Yearbook of National Income 1976), Warsaw 1976, pp. 87, 90, 92, 93, 95; G.U.S., Rocznik dochodu narodowego 1984 (Yearbook of National Income 1982), Warsaw 1982, pp. 65, 68, 70, 71, 72; G.U.S., Rocznik statystyczny 1984 (Statistical Yearbook 1984), Warsaw, 1984, p. 73.

4. Direct Causes of the Economic Downswing

Even if all mistakes, which were made during the attempted modernization, restructuring and opening of the economy in the first half of the 1970's, were avoided and the unnecessary increases in import intensity did not take place, there still would have been a substantial increase in the volume of import. It was the failure to modify the system and to create a viable modern export sector that was mainly responsible for the balance-of-payments disequilibrium and the heavy and growing indebtedness. No economy can now accelerate its growth without an increase in import-intensity, caused not simply by an increase in import induced by the increasing income but also by an upward shift in the propensity to import, and without, therefore, a greater dependence on the world economy.[20]

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[18] W. Trzeciakowski, "Problemy planowania i zarzadzania w polskim handlu zagranicznym" (Problems of Planning and Management in Polish Foreign Trade), Handel zagraniczny, No. 1, 1980, pp. 9–12; W. Trzeciakowski, "Handel zagraniczny: diagnoza i terapia" (Foreign Trade: Diagnosis and Therapy), Handel zagraniczny, No. 7, 1981, pp. 3–7; S. Gruzewski, "Problemy specjalizacji eksportowej" (Problems of Export Specialization), Handel zagraniczny, No. 4, 1980, pp. 27–29.

[19] H. Herer and W. Sadowski, "Czy rozumiemy wlasna, gospodarke?" (Do We Understand Our Economy?), Zycie Gospodarcze, No. 23, 1983, pp. 1, 6.

[20] Z.M. Fallenbuchl, "Economic Growth and Increasing Dependence on the World Economy: Some Lessons from Poland's Experience for East-West Economic Relations," paper presented at

Continued

Faced with the balance-of-payments crisis, and with increasing indebtedness, Gierek's planners decided to cut abruptly imports in an administrative and arbitrary manner.[21] A sudden decline in the supply of imported materials, components and other intermediate goods and complementary machines and equipment interrupted production processes. Unused productive capacities appeared and the number of unfinished investment projects increased the shortage of complementary goods and components. Through the foreign-trade-supply multiplier mechanism[22] a reduction in import had a magnified impact on national product and subsequently reduced export. The policy became, therefore, counterproductive.

The extent of the downswing is clearly demonstrated by the rates of growth of DNMP which starting in 1975 declined from one year to another and became negative for the first time in 1979 (see Table I) and the nature of the downswing is best illustrated by comparing changes in DNMP and import (see Table II).

The crisis of 1979 hit the entire economy. Net industrial production declined by 1.7%, net construction production by 6.2% and net agricultural production by 7.2%, while the hard currency indebtedness reached $23 billion.

The annual plan for 1980 was balanced only on the basis of unrealistic assumptions as to the improvements in productivity. It had to be revised downward in June.[23] In the first quarter of 1980 the total value of unfinished investment projects was 800 billion zloty ($16 billion at the "foreign trade coefficient of exchange" used for planning purposes at that time), or 41% of the DNMP in 1979.[24]

The government and party leaders were unable to cope with this serious and rapidly deteriorating crisis. As the Party Congress that was held at the beginning of 1980 indicated, they had no stabilization program other than the policy of effecting further cuts of imports from the West and attempts to reduce the output of producer good in order to expand that of consumption good and exportabes. This policy increased chaos within the economy. Horizontal and vertical links between industrial enterprises were cut. The output of consumption goods or exportables had to be reduced because either the production of some essential components of materials was discontinued or, when produced, they were pushed for export.

The economic situation was aggravated by a catastrophical situation in agriculture. This sector had been neglected since the end of the 1940's. Depsite decollectivization, private agriculture was not only discriminated against in the supply of inputs but subjected to clumsy bureaucratic controls. The so called "steering of agricultural production" with the help of changes in the prices of agricultur-

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the Fourth Annual Sevanee Economics Symposium, The University of the South, Sevanee, Tenn., March 1983.

[21] For a more detailed discussion of this policy see Z.M. Fallenbuchl, "The Polish Economy at the Beginning of the 1980's" in Joint Economic Committee, U.S. Congress, East-European Economic Assessment, Washington, D.C.: U.S. Government Printing Office, 1980, Part I, pp. 33-71.

[22] On the working of the foreign-trade-supply multiplier in the Soviet-type economies see F.D. Holzman, Foreign Trade Under Central Planning, Cambridge, Mass: Harvard University Press, 1974, pp. 126-135.

[23] "Problemy i zadania Narodowego Planu Spoleczno-Gospodarczego na rok 1981" (Problems and Tasks of the National Socio-Economic Plan for 1981), Gospodarka planowa, No. 2, 1981, p. 61.

[24] M. Gorski and K. Ryc, "Ktoredy do stabilizacji" (The Way to Stabilization), Zycie gospodarcze, No. 11, 1981, p. 12.

al products and inputs created great instability and chaos and, together with uncertainty about the future of private farms, discouraged efficiency of production, modernization and investment. The government policy devastated rural areas and became responsible for the backwardness of agriculture and its inability to cope with unfavourable climatic conditions (see Table I).

It became clear that it was impossible to improve the efficiency of the economy, to stablize it and to reduce foreign indebtedness without some far-reaching economic reforms, a carefully prepared stabilization plan, a drastic change in agricultural policy and a multilateral debt renegotiation.

The wave of strikes in August and September 1980 enforced another change in the party and government leadership. Independent labour and farmers unions were created. Liberalization of political life started to take place. A possibility for economic reforms and changes in economic policy was created, although the economic situation continued to deteriorate. Strikes and labour unrests created work stoppages but losses in production caused by them were by far exceeded by those related to the lack of imported materials and parts.[25] Many working hours were lost because of an uneven supply of electrical power caused by the arbitrary switching off policy introduced not only because of the shortages of coal, which could be traced to the labour problems in coal mining, but also because of limited generating and, particularly, distribution facilities and frequent breakdowns of antiquated and overburdened equipment. This was the result of the past neglect of this sector.

Between August 1980 and December 1981 an incredible waste of time and inertia in the economic field followed under Kania and, later, Jaruselski as first secretaries of the party. No effective mechanism of consultion and cooperation with the free labour unions was established.[26] Instead, the main stress was on undermining "Solidarity", an attempt to win over the workers by offering higher wages than those demanded by the unions or by introducing automatic upward adjustments in wages throughout the economy when granting a particular raise in wages.[27] With industry considerably overstaffed and work stoppages caused by the shortages of materials, parts and energy, the government chose to accept a major confrontation with the unions in defense of a longer working week, which their own experts regarded as counterproductive and had been advising for some time that it should be reduced.[28]

By the middle of 1981 the whole production and distribution process was in disarray. The links between industrial enterprises and between agriculture and the rest of the economy were broken. The command system of management collapsed and there was a general feeling in Poland that no return to it would be possible. However, nothing was introduced in its place. This "systemic vacuum" was accompanied by a paralysis at all levels of economic administrations and the disintegration of the party, which in the Soviet-type economies provides an effective control over the economy. Despite the Extraordinary 9th Party Congress that was held in July, there was a widespread feeling that the authorities were unable to formulate any viable policy which could stop the downward spiral.[29]

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[25] Pajestka, op. cit., p. 45.

[26] W. Bojarski et. al., Kryzys gospodarki polskiej (The Crisis of the Polish Economy), Warsaw: Instytut Wydawniczy Zwiazkow Zawodowych, 1981, p. 24.

[27] A. Kuszako, "Instynkt i rutyna" (An Instinct and a Routine), Zycie gospodarcze, No. 45, 1980, p.6.; A. Kuszko, "Filozofia czy chytrosc?" (A Philosophy or Canniness), Zycie gospodarcze, No. 50, 1980, pp. 10, 12; S. Lipinski, "Dziewiec dni Czestochowy" (Nine Days in Czestochowa), Zycie gospodarcze, No. 49, 1980, p.7; S. Lipinski, "Korygowac sie nawzajem" (Mutual Corrections), Zycie gospodarcze, No. 40, 1980, pp. 1, 6.

[28] H. Strzemińska, "Sprawa 8 minut" (The Matter of Eight Minutes), Zycie gospodarcze, No. 47, 1980, p.2; H. Jastrzebska-Smolaga, "Czy pora reformowac czas pracy?" (Should We Reform Working Time Now?), Zycie gospodarcze, No. 51–52, 1980, p. 3; A. Kuszko, "Na marginesie wolnych sobót" (On the Free Saturday), Zycie gospodarcze, No. 6, 1981, p.2.

5. STABILIZATION ATTEMPTS, AUGUST 1980–DECEMBER 1981

After August 1980 the new leadership continued basically the same policy as that which had been applied by Gierek's equipe in the second half of the 1970's. The planners were trying to reduce production for investment and to increase production for the domestic consumer market and for export, and to reduce further imports from the West, using again administrative commands in a more or less arbitrary way. Under the pressure by "Solidarity" and public opinion the government finally prepared two documents: (1) "The Government Report on the State of the Economy" and (2) "The Government Program for Ending the Crisis and Stabilizing the Economy." They were sent to a parliamentary committee in April 1981 which rejected them as inadequate. After a hasty revision by two ad hoc groups of experts appointed by Premier Jaruzelski, the two documents were resubmitted to the Sejm (parliament). They were published in July 1981 and were briefly debated and accepted by the 9th Party Congress.[30]

The first of the two documents was reasonably accurate in its final version. It clearly demonstrated that the economic crisis had its roots in the malfunctioning of the overcentralized command system and wrong policies that were followed during the 1970's, that the cumulative downward movement had already reached very serious dimensions before the strikes of August 1980 and that the government was unable to stop it. The stabilization program was a mixture of various, mostly administrative, measures without any clear overall strategy. It did not take into consideration that the heavy indebtedness and increased import intensity had resulted in a high degree of the openness of the economy and that, for this reason, stabilization should start with multilateral debt renegotiations which would reduce the burden of repayments and secure some new credits, absolutely essential to provide a certain minimum mass of necessary imports of raw materials, parts, other intermediate goods and complementary machines. Instead of trying to increase in this way the use of the underutilized productive capacities and to remove some most harmful bottlenecks, it recommended further reductions in imports from the West and the so called "conversion," i.e., another restructuring of the economy

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[29] Bojarski et. al., op. cit., p.24; for more details see Z.M. Fallenbuchl, "Poland: Command Planning in Crisis," Challenge, v. 24, No. 3, 1981, pp. 5–12.

[30] "Rzadowy raport o stanie gospodarki" (The Government Report on the State of the Economy), Warsaw: Trybuna Ludu, July 1981, "Rzadowy program przezwyciezenia kryzysu oraz stabilizowania gospodarki kraju" (The Government Program for Ending Crisis and Stabilizing the Economy), Warsaw: Trybuna Ludu, July 1981.

"from above" by administrative measures in order to reduce the dependence of the economy on import, especially from the West, and to shift resources from investment to domestic consumer market and to export. The authors of the program apparently were not aware that this was exactly the policy that had chocked production, triggered off the downswing and was mainly responsible for the deepening of the crisis.

Despite preparations for the introduction of economic reform as from January 1, 1982, a number of measures were adopted during the second half of 1981 that were increasing the use of administrative commands. A special task force, the "Anti-crisis Operation Staff," was created to coordinate activities of various government departments and agencies. A number of "protected areas" were defined and the so called "operational programs" were formulated, each representing administrative measures to ensure the production and distribution of a particular group of urgently needed products. As the production of various intermediate products was not covered by the programs, in some cases the production of the high priority final products was stopped because of the lack of certain relatively insignificant materials or parts. As has been pointed out by a Polish economist, this experience has demonstrated once again that "the economy is not divisible, that the priority production always collapses because of the lack of a small detail, a machine or an intermediate good, which is produced in the low priority sector." [31]

The central plan for 1982 was prepared in three variants which depended simply on the output of coal. If this output would decline from 163 million tons in 1981 to 155 million tons in 1982, the DNMP was expected to decline by 8.3%. If the output of coal could be raised to 175 million tons, the maximum variant would be possible which was an increase in the DNMP by 2.1%. The middle variant assumed the output of coal of 168 million and it was accepted as the most probable. It envisaged the following rates of growth: DNMP −1.4%, industrial production −3.3%, construction −2.9% and agriculture +4.3%.[32] Hence, the measures that would expand production of coal were necessary in order to stabilize the economy. This argument was used to provide an economic justification for martial law which was, of course, imposed for political and not economic reasons.

Subsequent experience has demonstrated that there is no such simple linkage between the amount of coal available and industrial output and national product. Under martial law the output of coal reached 189 million tons and, yet, the decline in the DNMP was equal to the decline associated with the minimum variant which had been described ty the planners at the end of 1981 as excessively pessimistic, which could only happen under the most unfavourable conditions.[33]

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[31] "Priorytety i realizm" (Priorities and Reality), Zycie gospodarcze, No. 43, 1981, p.4.

[32] "Wstepne zalozenia do projektu centralnego planu spoleczno-gospodarczego w 1982r" (Introductory Assumptions for the Central Socio-Economic Plan for 1982), Zycie gospodarcze, No. 38, 1981, p.4.

[33] This view was expressed by the chairman of the state planning commission. "Prognozy obaw i nadziei" (Prognoses of Fears and Hopes), Zycie ggospodarcze, No. 38, 1981, p.1.

The plan for 1982 was anyway withdrawn when the martial law was introduced and replaced at first by two quarterly plans and subsequently by a plan for the second half of the year. Because of their short horizon these plans represented reactions to current difficulties rather than a serious stabilization effort.

6. ECONOMIC REFORM

The overall decline in output in 1979 and deepening of the crisis in 1980 increased demands for economic reform. After the withdrawal or atrophy of systemic modifications which had been introduced in 1956, no serious reforms were attempted by Gomulka [34] and Gierek's systemic modifications, which were introduced in 1973, were more of an industrial reorganization nature than a systemic reform. A certain degree of decentralization was introduced for the newly established "big economic organizations" (WOG), or industrial conglomerates, but the rules of the game were changed already in 1985 and recentralization took place.[35]

Under the pressure of the strikers' demand and public opinion, the Central Committee of the Party and the Council of Ministers created a huge Committee for Economic Reform in September 1980. More than 80 members, secretariat and eleven working groups of experts, together about 500 persons, were to discuss and prepare a proposal for a major economic reform. From the beginning it was clear that no fast action could be expected from such a large body. However, under the pressure of political events it became necessary to create an impression that something was being done on the economic front, and it was easier to present programs for reorganization than to stabilize the economy. The Committee accepted a proposal for reform, which the Polish Economic Association had been preparing from June 1980 and published in October,[36] as a basis for its own proposal. A shorter, a considerably milder and much more vague version of the original proposal was published in January 1981.[37] In the meantime several other proposals were published either by individual economists or by groups associated with some academic institutions.[38]

A few administrative measures were introduced from January 1, 1981 and were referred to as a "little reform." It involved: (1) replacement of gross by net production targets; (2) reduction in the number of directives to the size of output and a list of special products needed for the domestic consumer market and for export; (3) increased workers participation; (4) elimination of the employment and average wage limits for the enterprises; (5) integration of various funds within the enterprise into one enterprise fund; and a few other purely administrative changes. Although all these changes had been recognized by many Polish economists as important for a long time before, this certainly was not an attempt to modify the command model to any significant extent. It was received with disappointment and it was assessed as "a timid and clumsy move" which "demonstrated the state of inertia".[39] The delays with which specific instructions were prepared, and the lack of clear-cut decisions as to their interpretation increased further the degree of instability throughout the economy.[40]

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[34] For an excellent discussion of various proposals and actual modifications see J.G. Zielinski Economic Reforms in Polish Industry, London: Oxford University Press. 1973.

[35] For more details see Fallenbuchl "The Polish Economy at the Beginning of the 1980's."

[36] Propozycje zasadniczynch rozwiazan reformy gospodarczej w Polsce (A Proposal of Basic Proposals of Economic Reform in Poland), Warsaw: P.T.E., 1980.

[37] Podstawowe zalozenia reformy gospodarczej (Basic Principles of Economic Reform), Warsaw: Trybuna Ludu, January 1981.

[38] See for example, L. Balcerowicz et. al., Alternatywy rozwoju i reforma gospodarcza, Warsaw: P.T.E., 1980; "Propozycje zmian w systemi funkcjonowania gospodarki" (Proposed Changes in the System of the Functioning of the Economy), Zycie gospodarcze, No. 20, 1981.

At the Fourth Congress of the Economists and the Thirteenth Meeting of the Polish economics Association, which were jointly held on March 6–8, 1981, the proposal of The Committee for Economic Reform was severely criticised. A resolution expressing that criticism asked for a change in the procedure for the preparation of the reform and for the acceptance of all proposals on the equal basis. the Committee for Economic Reform revised its proposal, making it bolder and more far reaching. It was published just before the 9th Party Congress which accepted it almost without a serious discussion.[41]

The reform, which was to be introduced from January 1, 1982, was built on the basis of three principles: (1) the autonomy of the enterprises; (2) their self-government; and (3) self-financement. It envisaged a reduced role of the planning commission in day-to-day operations of the enterprises. It was supposed to concentrate on making the main strategic decisions, to maintain the macroeconomic balance and to determine some fundamental structural changes. The annual plans, which were the main instrument of administrative command planning, were to be deemphasized and the role of five year plans would change. They were to indicate the main planners' decisions and would not include specific commands. There would also be a greater stress on the long-run prospective plans of 10–15 years duration. The number of the so called "branch ministries" (i.e., the ministries responsible for various sectors of the economy which had a very high degree of bureaucratic power and were regarded as centres of vested interests, which usually gave priority to their sectoral rather than national interests) was to be reduced and their role changed as they would be responsible for the establishment and liquidation of the enterprises, their overall control and for supporting their activities by, for example, research and development. The middle administrative level, existing in the form of obligatory associations of enterprises, was to be abolished. They were representatives of the ministries which controlled the enterprises in great detail, making for them all most important decisions in a purely administrative manner, and exercised a very strong monopoly power as the effective controllers of the entire production of a particular group of products. Financial results of the enterprises were to become the only success indicators, but there was no agreement on how these results should be calculated and two indicators were accepted: profit and net production. The centre was to control the economy with the help of centrally determined economic instruments, or "parameters," such as prices, interest rates, taxes, exchange rates and various "norms," which would indicate the desirable input-output or time requirements. The role of economic instruments was expected to gradually increase and that of administrative commands and controls to decline in the future.

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[39] B. Fick, "Zalozenia byly ambitne" (The Aims Were Ambitious), Zycie gospodarcze, No. 6, 1981, p. 7.

[40] "Drogi Wyjscia z kryzysu" (The Way Towards the Recovery), zycie gospodarcze, No. 6, 1981, p. 13.

[41] Kierunki reformy gospodarczej-projekt (Directions of Economic Reform: a Proposal), Warsaw: Trybuna Ludu, July 1981.

This was, therefore, to be a mixed system of "parametric and administrative command steering of the economy." Perhaps it would have helped, if introduced at the beginning of the 1970's, to avoid the collapse of the "new development strategy," but it was unrealistic in 1981, when the econmy was in a complete disarray. In this situation no fine tuning by the central authorities was possible. The only effective solution would have been to give the enterprises a free hand as soon as possible, to encourage them by strong material incentives to expand profitable production, especially for export, and to control them only by looking at the clearly defined overall financial results: profit.[42]

In September 1981 the Sejm enacted two important laws which were to serve as a basis for the reform: (1) on the state enterprises, which guaranteed them full autonomy, selfgovernment and selffinancing; and (2) on the selfgovernment, which made the manager responsible to the workers' council which could stop his decisions under certain specific circumstances.[43] In November the Council of Ministers issued "The Principles of the Operation of the State Enterprises in 1982."[44] It listed nine operational programs, listed twelve groups of consumption goods and services and nineteen groups for which prices would be fixed and ten groups of consumption goods for which prices would be "regulated" by the central authorities, leaving other prices free to be determined by agreements between the selling and buying enterprises. It also listed 89 materials and machines that were to be centrally balanced and included in the Central Annual Plan and maintained central allocation of 16 groups of materials and defined priorities. There were also specific regulations concerning employment, wages and social benefits, financial regulations, taxes and participation in foreign trade. The overall picture was that of a modified centrally planned command economy with some liberalization and decentralization of decision making.

The reform was introduced, as scheduled, from January 1, 1982 despite the imposition of martial law on December 13, 1981. Selfgovernment was eliminated for the duration of the martial law, although later some individual cases were examined and approved. The formally created autonomy of the enterprises was limited by the appointment of military commissioners, by the replacement of the old intermediate chain of management by a new form, instead of eliminating it in accordance with the provisions of the reform, and by the existence of operational programs whose number and extent were enlarged. Self-financement was seriously limited by the imposition of direct administrative and financial controls which, in effect, reduce incentives, while the so called "soft financing" of the enterprises by easy and cheap credit and subsidies eliminates the link between the availability of funds and the financial results of the operations of the enterprises.[45] Above all, although the number of branch ministries declined, their power and that of the new associations increased, especially because of their control of the rationing of materials, prices and subsidies. While the manager obtained a full power over his enterprise, he clearly became dependent on his ministry and administration.

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[42] The author discussed this point in Z.M. Fallenbuchl, "The Origins of the Present Economic Crisis in Poland and the Issue of Economic Reform," In A. Jain (ed.), "Solidarity: The Origins and Implications of Polish Trade Unions," Baton Rouge: Oracle Press, 1983, pp. 149-166.

[43] Ustawy: o przedsiebiorstwach panstwowych; o samorzadzie przedsiebiorstwa panstwowego (Acts: on the Industrial Enterprises; on Self-government Within the State Enterprise), Warsaw: Ksiazkai Wiedza, 1981.

[44] Zasady dzialalnosci przedsiebiorstw panstwowych w 1982 roku, Warsaw: Trybuna Ludu, December 1981.

The reform was introduced under the conditions of martial law with the economy paralized and administrative chaos, telephone connections interrupted and restricted mobility of persons. Various specific instructions were issued with the delay of two or three months and the enterprises were left in a vaccum. Despite various modifications, which were declared necessary because of martial law, the authorities were stressing their full commitment to the reform as adopted by the 9th Party Congress. It seems that an official strategy, which was adopted at the time martial law was imposed, was to talk about reform and to enact legislation which clarified its various aspects, but at the same time to slowly introduce various changes that de facto constitute a retreat to a more centralized model. This strategy has not been changed after the end of martial law.[46]

7. The Economy Under Martial Law

Martial law was imposed for political and not for economic reasons. It made possible for the authorities to abolish free labour and farmers unions, to de facto withdraw from the agreements that had been signed with the strike committees in 1980, to stop the liberalization wave, to detain the activists and to strengthen censorship and police control. In the economic field, it helped to re-establish the weakened position of the administration at all levels. The party provides in the Soviet-type economies an additional line of control over the economy and duplicates the structure of state administration. Its desintegration had created a gap which the authorities filled by establishing special posts of military commissioners and by appointing military to various administrative positions.[46] The effects of the imposition of martial law on the economy were, however, mainly unfavorable.

Above all, it was not conducive to gaining the trust and cooperation of workers and a wide support by the population on which, as the government's own document stresses, a viable recovery program must depend.[47] Western sanctions, the refusal by the creditor governments to discuss rescheduling of public debt and the interruption of negotiations for readmission to the International Monetary Fund and the World Bank had a considerable adverse effect. Unfavourable conditions were created for the introduction of the economic reform, parts of which were "adjusted to the requirements of martial law." [48]

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[45] Z. Szwaja, "System finansowy przedsiebiorstw: proba oceny" (The Financial System of the Enterprises: an Evaluation), Zycie gospodarcze, No. 37, 1982, p. 3.

[46] For the discussion of the role of military under and after martial law see A. Ross Johnson and Barbara Kliszewski, "The Polish Military After Martial Law," Santa Monica: Rand N-2001-AF, June 1983.

[47] Rzadowy program * * *.

Special attention was given to coal mining as, according to the plan for 1982, the three variants of the general level of economic activity were assumed to depend on the ability to obtain certain levels of coal production. Coal mining was, therefore, "militarized," i.e., the miners were enlisted. They worked subject to military discipline and could be court-martialled for not following orders. This type of management can be applied only in an industry with a homogeneous product, where the quality of output cannot be affected adversely by workers' attitude and where output can be increased by expanding employment, working hours and/or machines and equipment. At the same time, the authorities offered, however, high wages, special privileges and priorities in the supply of scarce consumption goods. Some additional 3.5 thousand new miners were attracted in January and February 1982 alone and 3 out of 9 new mines under construction were put into operation. The output of coal in December 1981 was adversely affected by the active and passive resistance of the miners. Starting with January 1982, the output was higher every month than in the corresponding month of the preceeding year. The annual output in 1982 and output in the first three quarters of 1983 were, however, lower than the levels in the corresponding periods in 1979 and 1980 (see Table VI).

TABLE VI.—OUTPUT OF COAL

[Million tons]

	1979	1980	1981	1982	1983
January	17.7	17.0	13.3	15.4	15.5
February	16.1	17.0	13.3	15.0	15.0
March	17.8	18.0	14.7	17.0	17.0
April	15.9	17.0	13.9	15.7	15.7
May	17.3	17.9	13.0	15.8	16.4
June	16.5	17.0	13.2	15.7	15.6
July	15.9	16.7	13.7	15.9	15.3
August	16.1	16.5	12.8	15.9	16.7
September	16.7	13.3	13.9	15.9	16.1
October	18.4	15.6	14.1	16.0	16.1
November	17.1	13.6	13.9	15.6	15.6
December	15.5	13.4	13.2	15.5	16.1
January–December	201.0	193.1	163.0	189.3	191.1

Source: G.U.S., Rocznik statystyczny (Statistical Yearbook), 1981, p. 269; 1982, p. 202; 1984, p. 240. Zycie gospodarcze, No. 3, 1983; No. 13, 1983; No. 18, 1983; No. 20, 1983; No. 22, 1983; No. 26, 1983; No. 34, 1983; No. 39, 1983.

Contrary to the planners' expectations, the increased output of coal, which exceeded the maximum variant of the plan for 1982, did not result in the stablization and revival of the economy. Industrial "sold production" (a gross measure which includes double counting and tends to increase when material costs increase and the production becomes less efficient) was in 1982 below its 1981 level in every month during the first half of the year (see Table VII). For the year as a whole DNMP declined by 5.5%, as in the minimum variant of the plan. The situation deteriorated throughout the entire economy. Net industrial production declined by 4.5%. The output of construction enterprises declined by 6% and the number of new housing units which were finished in 1982 declined by 8% in comparison with 1981. The total volume of goods transported during the year, which is an indicator of economic activity, declined by 12%. Net agricultural production increased by 4.9%. However, in January 1983 the number of pigs was smaller by 2 million animals than in July 1982 and by 4 million smaller than the 1980 number.

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[48] W. Baka, "Start reformy" (The Beginning of the Reform), Zycie gospodarcze, No. 2, 1982, pp. 1, 4.

TABLE VII.—INDUSTRIAL "SOLD PRODUCTION"

[Billion zloty at 1982 prices]

Month	1981	1982	1983
January	604.5	512.6	610.0
February	599.9	533.3	576.0
March	643.3	604.7	647.0
April	576.3	540.0	566.8
May	576.4	560.8	600.0
June	592.5	579.5	605.0
July	528.3	504.0	534.1
August	525.5	533.4	599.4
September	535.6	582.7	617.1
October	552.4	580.0	607.9
November	596.2	620.0	626.8
December	576.6	640.0	630.1
January–December	6,907.1	6,791.0	7,258.5

N.B. Values for 1981 are calculated from 1983 and 1982 values and monthly increases claimed in those years in comparison with the same month in the previous year or two previous years. Comparison of monthly, quarterly and annual increases and values reveal considerable inconsistencies.

Sources: Zycie gospodarcze, No. 27, 1982; No. 32, 1982; No. 36, 1982; No. 40, 1982; No. 44, 1982; No. 4, 1983; No 13, 1983; No. 18, 1983; No. 22, 1983; No. 26, 1983; No. 29, 1983; No. 34, 1983; No. 39, 1983; No. 4, 1984.

As imports declined while there was some expansion in export, especially to the socialist countries (see Table III), the decline in NNMP of 10.5% was greater than that in DNMP. Total consumption declined by 11.5% and investment in fixed capital by 30.1% (see Table I).

Various measures, applied by the Military Council for National Salvation which was created on December 13, 1981 as a *de facto* supreme authority, were clearly not compatible with the officially introduced economic reform. Every "operational program" was put under the command of a special commissioner. However, by the middle of the year some enterprises, even those exclusively working for a given program, did not have all the necessary information. As the number of programs increased, they ceased to represent priorities. They did not fully take into consideration production links among the enterprises. They have been often criticized in the Polish economic press, for example, on the grounds that (1) they were not based on a sound methodological basis; (2) "there is a negative social climate around them and in that present socio-political situation this reduces their usefulness"; and (3) "they narrow down the area within which the reform functions,"[49] as they use administrative allocation of materials and intermediate goods to secure the fulfilment of their targets. It has been calculated that at the beginning of 1983 some 12,000 people were employed in the process of this allocation.[50]

The extent of administrative allocation was not reduced with the formal end of material law in July 1983. On the contrary, it was further extended. This is not, however, the only factor which limits the formally created autonomy of the enterprises. During the period of martial law it was also limited by the appointment of military commissioners. When martial law ended, the central authorities were given extended rights to interfere in the affairs of the enterprises involved in production under the newly created system of "government contracting".[51]

Under martial law all forms of workers' participation, even the purely decorative old workers' councils were suspended. Later self-government was reintroduced on an individual basis. In the first half of 1983 only 600 out of the total 6,600 enterprises still did not have self government. This is, however, only a purely formal institution which has no effective power. Its decisions are easily overruled by the management, the associations and the branch ministries, often in the form of some convenient reinterpretation of the existing legislation. Similarly, selffinancement of the enterprises is limited not only by interventions by the associations and the banks, but also by a heavy taxation burden and subsidies, which do not create financial motivation and do not induce savings.[52]

Many aspects of the original reform have already been modified, sometimes more than once. Changes in the rules of the game act as disincentives for the managers to improve the efficiency of their enterprises and create an additional source of instability. Moreover, they tend to increase the extent of arbitrary administrative decisions. They bring back the old inefficient methods of bargaining between the enterprises and the associations, economic ministries and central planning commission, for the allocation of resources, lead to the concealment of information and induce the enterprises to present unnecessarily big demands.[53]

The reform either has not been introduced at all or, if introduced, it has been working in a completely restricted form in a large part of the economy, including mining, electrical power generation, construction, trade, transport and communications and all attempts to reform the central economic administration were stopped immediately after they had been tried in 1981.[54] For 1984 new changes in the reform have been introduced which, in the opinion of the majority of the Committee for the Reform, "will sup-

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[49] J. Supera and A. Zaremba, "Programy operacyjne: idea a rzeczywistosc" (Operational Programs: the Idea and Reality), Zycie gospodarcze, No. 22, 1982, p. 6.

[50] "Zdecyduje klimat spoleczny (The Social Climate Will Decide), Zycie gospodarcze, No. 19, 1983, p. 2.

[51] S. Lipinski, "Czy pan jest za reforma, czy nie?" (Are you for the Reform or Not?), Zycie gospodarcze, No. 33, 1983, p.1; I. Dryll, "Jaka jest kondycja samorzadu?" (What is the State of Self-government?), Zycie gospodarcyze, No. 21, 1983, p. 3.

[52] Ibid.

[53] T. Jeziorański, "Popierwsze nie szkodzić" (First of All Don't Hurt), Zycie gospodarcze, No. 27, 1983, pp. 1, 4.

[54] T. Jeziorański, "Obrona" (The Defence), Zycie gospodarcze, No. 28, 1983, p.2.

port those enterprises that are not efficient" and further restrict the autonomy and selffinancing of the enterprises.[55] In this situation it is not surprising that the reform does not work, although it is not certain that even if it were fully implemented without bureaucratic interference in its original form, it would be sufficiently far-reaching and internally consistent to deal with the present crisis of the Polish economy.[56]

There has been no rationalization of employment, no improvement in the overall efficiency of industry, no improvement in material- and energy-intensity and wages have been growing more rapidly than productivity. It is clear, therefore, that the pattern of development has not become more "intensive." In this respect Jaruzelski's planners have not been more successful than Gierek's and, earlier, Gomulka's.

It could have been expected that the heavy-handed policies associated with martial law would stop inflation. This has not, however, happened. In 1981 nominal personal incomes of population increased by 27 percent and the demands by free labour unions were blamed for the situation, although the government was at that time involved in restructuring and adjusting wages and social welfare payments. In 1982, without pressure by labour unions, nominal personal incomes of the population increased by 63 percent in 1983 by 26 percent and in 1984 by 20 percent. The idle cash balances in the hands of the population increased from 270 billion zloty at the end of 1980 by 100 billion to 370 billion at the end of 1981, by 190 billion to 560 billion at the end of 1982, by 99 billion to 659 billion at the end of 1983, and by 101 billion to 760 billion at the end of 1984 (see Table VIII).

TABLE VIII.—NOMINAL PERSONAL INCOMES, EXPENDITURES AND SAVINGS

	Billion zloty					Rates of change (percent)			
	1980	1981	1982	1983	1984	1981	1982	1983	1984
Nominal personal incomes	1,640	2,090	3,400	4,287.6	5,128.0	27	63	26	20
Wages	960	1,210	1,760	2,175.6	2,597.7	26	46	24	19
Social payments	190	270	630	754.1	886.1	37	139	20	18
Credits	NA	NA	NA	149.2	177.5	NA	NA	NA	19
Income from the sales of agricultural produce	270	370	610	715.7	800.2	39	66	17	12
Expenditures from personal incomes	1,550	1,810	3,010	3,992.7	4,843.2	13	67	33	21
Savings from personal incomes	90	280	390	293.6	284.8	210	36	−25	−3
Deposits	40	180	200	194.8	184.1	260	11	−3	−5
Cash	50	100	190	98.8	100.7	150	90	−48	2

Sources: *Zycie gospodarcze*, No. 7, 1983, p. 9; No. 39, 1983, p. 8; No. 51/52, 1983, p. 9; No 4, 1985, p. 15.

The big increases in prices, which were supposed to stop inflation and to eliminate deficits of the state enterprises and, therefore, to remove the need for subsidies, did not stop inflation because, faced with passive resistance by the population and "a very limited trust in the authorities",[57] the government has been trying to use

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[55] "Wsparcie dla niegospodarnych?" (The Support for Those Who Are Not Efficient?), Zycie gospodarcze, No. 27, 1983, p.5.

[56] For more details see Z.M. Fallenbuchl, "The Polish Economy Since August 1980; Canadian Slavonic Papers, v. XXV, No. 3, 1983, pp. 361-379.

[57] W. Baka, "Dzis is jutro reformy" (Today and Tomorrow of the Reform), Zycie gospodarcze, No. 48/49, 1982, p.1.

"money illusion" in order to reduce the full psychological impact of the economic crisis and its inability to stabilize the economy. Retail prices increased, accepting the December 1981 level as 100, to 136 in the first quarter of 1982, 163 in the second, 171 in the third and 176 in the fourth quarter of 1982. The Plan for 1983 envisaged that prices would increase by 15%. They increased by 22% in that year and 15% in 1984. As the result of these price increases the cost of living of the average household of the employees of the socialist sector of the economy were about 100% higher in 1982 than in 1981. The cost of living in the households of individual farmers was 103% and that of the households of pensioners, invalids, etc. 110% higher.

The main stress of the anti-inflationary policy was placed on the increases of prices, which drastically decreased real incomes, but not induced increases in output which was mainly restricted by the shortages of imported raw materials and intermediate goods.

A political rather than a military solution could have, perhaps, had better results in containing this source of inflation. The authorities might have received support from labour leaders for the necessary policy of austerity as "Solidarity" always maintained that it would accept even harsh measures if they would form an integral part of a viable stabilization and reform program.[58] The task would have been even easier if the authorities were able to show that these measures were regarded as necessary by the IMF and formed a part of an overall stabilization program supported by foreign creditors.[59]

The second major source of inflationary pressures was the state budget. In 1982 there was a deficit of 240 billion zloty, or 10% of the total budgetary expenditure. The deficit would have been even greater if it were not reduced by the withdrawal of 155 billion from the central bank. This was a "reserve" that the government had deposited with the bank in preceding years. However, a government deposit with the central bank represents a reduction in the supply of money and has an anti-inflationary effect. On the other hand a withdrawal of a certain sum by the government from the central bank represents the creation of money. When this amount is added, as it should, the deficit is increased to 368 billion. The plan for 1983 envisaged a deficit of 176 billion (7% of the budgetary expenditure)[60] The budget for 1984 was based on the assumption that the budgetary revenue would increase by 20.2% at current, or 4.5% in constant prices and expenditure by 21.9% at current and 6.0% in constant prices, and the deficit would be 130 billion zloty.[61]

Although one of the main reasons for the big price adjustments in 1982 and 1983 was an attempt to eliminate subsidies for unprofitable enterprises, this objective has not been achieved. The state budget for 1982 allocated 845 billion out of the total planned expenditure of 2,619 billion, or 32.3%, for subsidies necessary to cover the planned losses of the state enterprises, 43 billion as subsidies for agriculture and 174 billion for housing and related fields, together over 40% of the total budgetary expenditures.[62] Together all subsidies represented 61.6% of the total budgetary expenditures in 1983 and their share is raised in the budget for 1984 to 64.2%.[63] The existence of subsidies provides another proof that the reform is not working. One of its objectives was the elimination of unprofitable production either by changes in the structure of production and increase in productivity, or by adjustments in prices.

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[58] See, for example, "Reforma gospodarcza a warunki realizacji porozumien spolecznych" (Economic Reform and the Conditions of Social Agreements) Zycise gospodarcze, No. 2, 1981, p. 2.

[59] For more details on policies introduced under martial law and their results see Z. M. Fallenbuchl, "The Polish Economy Under Martial Law," Soviet Studies, v. XXXVI, No. 4, 1984.

[60] M. Krzak, "Budzet panstwa na rok 1982" (The State Budget For 1982), Finanse, No. 6, 1982, pp. 1-15; S. Nieckarz, "Budzet panstwa i bilans platniczy na rok 1983" (The State Budget and the Balance of Payment for 1983), Finanse, No. 1, 1983, pp. 1-8.

[61] T. Jezioranski, "Budzetowe lustro" (The Budgetary Mirror), Zycie gospodarcze, No. 51/51, 1983, p.2.

Results in foreign trade have been equally disappointing. This is the most important field from the point of view of stabilization and recovery. The immediate cause of the downswing was a very serious balance-of-payment disequilibrium rapidly increasing indebtedness and attempt to cope with this rapidly deteriotating situation by arbitrary cuts in imports by the central planners with the help of administrative measures.

8 Foreign Trade—The Key to Recovery

The introduction of martial law had an adverse effect on foreign trade by inviting Western economic sanctions, as well as by concentrating the attention of the authorities on internal matters over which a relatively simple military control was expected to give reasonably good results. The withdrawal by the United States of the Most Favourite Nation Clause, fishing rights and landing privileges, together with various restrictions and, above all, the denial of further Western government or government-guaranteed credits were reflected in a further drastic decline in the import from non-Socialist countries. In 1982 the decline was 26.4% in current and 24.2% in constant prices. It was not compensated by a corresponding increase of import from the socialist countries which increased by 3.7% in current prices, but declined in constant prices by 5.6%. During the first half of the year total import declined by 20.9% at current prices and 15.6% in constant prices. This decline had a catastrophic impact on production (see Tables I and III) and, again, adversely affected export of manufactured goods.[64] Despite all the administrative efforts to restructure production, exports to non-socialist countries increased by only 1.4% in current and 0.9% in constant prices, mainly because of an increased export of coal (during the first three quarters export of fuels increased in constant prices by 25% while export of all other commodities declined by 6%). The balance of trade with this group of countries became positive and changed from −8 billion zloty in 1981 to +122 billion in 1982. This was not enough to secure a positive balance on current account with non-socialist countries despite a decline in net interest payments (see Table IV).

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[62] Krzak, op. cit.

[63] Jezioranski, "Budzetowe . . ."

[64] B. Wojciechowski, "Warunki realizacji reformy gospodarczej w handlu zagranicznym" (Conditions for the Implementation of Economic Reform in Foreign Trade), Handel zagraniczny, No. 9, 1983, p.4.

Foreign exchanges could now only be obtained by export. In order to secure as much of them as possible for the import of materials and intermediate goods, the share of investment imports was drastically reduced (see Table IX).

TABLE IX.—ALLOCATION OF IMPORT ACCORDING TO USE

[Billion zloty, current prices]

Year	Total		Production		Market [1]		Investment	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Total import:								
1970	([2])	100	([2])	64.2	([2])	15.7	([2])	16.9
1975	([2])	100	([2])	63.6	([2])	8.8	([2])	24.5
1979	([2])	100	([2])	68.3	([2])	10.9	([2])	18.7
1980	1,079.4	100	734.0	68.0	120.9	11.2	186.7	17.3
1981	963.4	100	732.2	76.0	120.4	12.5	128.1	13.3
1982	862.0	100	681.0	79.0	117.2	13.6	69.8	8.1
1983 (Plan)	993.1	100	820.2	82.6	103.1	10.4	69.8	7.0
1983	970.2	100	746.6	76.9	122.6	12.6	68.8	7.1
1984	1,210.9	100	942.1	77.8	144.3	11.9	107.3	8.9
Import from Socialist countries (first region):								
1980	442.7	100	307.2	69.4	46.0	10.4	60.6	13.7
1981	494.0	100	372.5	75.4	55.8	11.3	65.7	13.3
1982	503.4	100	398.2	79.1	70.0	13.9	40.8	8.1
1983 (Plan)	561.4	100	465.6	82.9	51.8	9.2	44.0	7.8
1983	562.4	100	438.7	78.0	72.0	12.8	48.4	8.7
1984	662.8	100	513.0	77.4	79.1	11.9	66.4	10.0
Import from other countries (second region):								
1980	636.7	100	505.5	79.4	52.2	8.2	79.0	12.4
1981	469.4	100	359.1	76.5	63.8	13.6	46.5	9.9
1982	365.5	100	289.1	79.1	53.0	14.5	23.4	6.4
1983 (Plan)	431.7	100	354.6	82.1	51.3	11.8	25.8	6.0
1983	407.8	100	307.9	75.5	50.6	12.4	19.9	4.9
1984	548.1	100	429.1	78.3	65.2	11.9	40.9	7.5

[1] The supply of population, mainly consumption goods.

[2] Because of the change form deviza zloty to zloty no comparable data are available.

Sources: G.U.S., Rocznik statystyczny 1982 (Statistical Yearbook 1982), Warsaw 1982, P. 320; Zycie gospodarcze, No. 21, 1983, p. 9; No: 41, 1983, p. 8; No. 44, 1983, p. 8; No. 1, 1984, p. 9; No. 6, 1984; No. 40 1984, p. 14; No. 6, 1985, p. 14.

Even before economic sanctions were imposed by the West in response to the imposition of martial law, the authorities had accepted a "reorientation" of foreign trade as a device to reduce hard currency indebtedness. The expansion of trade with other CMEA countries has become one of the main principles of Jaruzelski's policy, together with attempts to reduce dependence on foreign trade, although already in the middle of 1981 the then minister of foreign trade pointed out that certain specific imports from the West are absolutely necessary and that they cannot be replaced by imports from the socialist countries.[65] In the opinion of many Polish economists the policy of reorientation is not only impossible as no substitutes are available, but also undesirable as it would restrict the inflow of Western technology. This would have, therefore, an adverse impact on the long-run prospects of growth.[66]

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[65] A. Lubowski, "Dyplomacja i gospodarka" (Diplomacy and the Economy), Zycie gospodarcze, No. 30, 1981, p. 4.

[66] J. Winiecki, "Warunki konkurencji a polski eksport w latach osiemdziesiatych" (Conditions of International Competition and Polish Export in the 1980's), Gospodarka planowa, No. 8, 1982, p. 314; J. Soldaczuk and A. J. Klawe, "Gospodarka swiatowa a polski handel zagraniczny w latach osiemdziesiatych" (The World Economy and Polish Foreign Trade in the 1980's), Gospodarka planowa, No. 8, 1982, p. 321.

In 1982 export to socialist countries increased by 24.1% in current and 16.6% in constant prices, also mainly because of the expansion of the export of coal. As the reduction in import from non-socialist countries was not compensated by a corresponding increase in imports from the socialist countries and there was actually a reduction in the volume of import, the negative balance of trade with those countries declined from 109.5 billion zloty in 1981 to 39.3 billion in 1982. This deficit does not necessarily imply an import of capital because Poland receives net payments for transit and shipping services from other CMEA countries, which are usually balanced by a negative balance of visible trade. Poland's indebtedness to those countries declined from 285 million rubles at the end of 1981 to 92 million at the end of September 1982. There is, therefore, no room here for any aid from the bloc as a whole, or for any substantial aid from any of its members.

The plan for 1983 envisaged again a positive balance of visible trade with non-socialist countries. With exports reaching 544.9 billion zloty and imports 431.7 billion, the positive balance of 113.2 billion was planned. In current prices the actual positive balance was 131.8 billion. At the same time the plan envisaged a negative balance in trade with socialist countries of 80.8 billion. However, the negative balance was only 41.8 billion in current prices. In other words, Poland received a considerably smaller inflow of goods from the CMEA countries above that volume for which it had to pay by export. During that year the export plan was fulfilled in 108.8% while the import plan only in 99.7% (see Table X).

TABLE X.—EXPORT OF SELECTED GROUPS OF PRODUCTS TO SOCIALIST AND OTHER COUNTRIES: RATES OF GROWTH AND SHARE OF TOTAL

[Current prices]

Selected groups of products	Rates of growth (percent)									Share of total export (percent)									
	1976	1977	1978	1979	1980	1981	1982	1983	1984	1960	1970	1975	1979	1980	1981	1982	Plan 1983	1983	1984
Export to Socialist countries:																			
Fuels and power	−1.8	1.8	7.4	−2.0	−30.5	−29.5	196.4	34.1	6.7	25.8	11.0	13.8	9.8	8.2	6.4	11.2	9.3	13.2	10.3
Metallurgy	−11.6	−2.0	10.5	−0.7	6.8	3.9	65.2	45.0	1.1	12.6	7.4	6.5	4.1	4.6	5.3	5.3	7.7	6.7	4.5
Engineering	12.4	14.3	12.4	12.6	1.4	−5.7	31.7	11.7	20.0	41.3	55.0	50.2	54.7	58.5	61.0	57.7	60.6	56.6	60.4
Chemical	12.8	11.1	7.3	0.4	9.9	−9.4	54.5	27.1	12.5	3.9	8.1	8.5	7.7	8.9	8.9	8.9	8.6	9.9	9.0
Mineral	35.8	12.1	−5.1	−18.2	1.5	16.7	87.8	40.2	26.4	0.7	0.5	0.4	0.3	0.3	0.4	0.5	0.5	0.6	0.6
Wood and paper	7.[illegible]	2.6	21.3	6.4	−15.5	−16.2	30.7	−4.3	26.2	1.5	1.7	1.2	1.1	1.0	1.0	0.9	0.8	0.9	0.7
Light industry	−0.9	14.7	22.6	−5.7	1.9	−11.6	−21.6	−27.5	12.2	7.5	9.4	10.3	9.1	9.8	9.5	8.2	6.9	5.2	5.2
Food processing	1.0	−14.7	23.5	−2.2	−10.8	−44.7	169.2	50.3	15.0	4.6	2.2	3.1	2.1	2.0	1.2	1.8	....	2.3	3.1
Agriculture	−28.3	58.6	−42.5	54.9	−46.8	−17.6	135.9	37.1		1.4	2.6	2.3	1.5	0.9	0.8	1.1	1.8	1.3	
Total	6.7	12.3	11.2	12.0	−5.1	−9.6	41.4	13.9	16.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Export to other countries:																			
Fuels and power	−4.6	0.2	1.5	15.8	9.9	−47.3	72.8	20.7	34.5	17.4	15.1	29.3	23.0	21.7	14.3	20.2	19.7	22.4	23.4
Metallurgy	13.1	15.4	22.4	39.3	44.4	−31.6	21.3	32.7	24.9	6.3	12.9	7.3	11.2	13.9	12.0	10.8	11.2	13.2	13.0
Engineering	15.3	20.1	8.6	4.6	19.2	1.7	−9.3	−1.7	20.7	11.0	15.0	21.5	23.5	24.0	30.6	27.8	29.2	25.2	21.6
Chemical	−16.7	12.1	−4.7	10.9	30.9	0.2	−3.3	4.9	47.3	6.7	8.8	10.5	7.2	8.1	10.1	9.2	9.7	8.9	10.4
Mineral	6.1	30.1	32.9	8.8	1.9	−28.0	−23.6	−0.9	60.9	1.6	1.7	1.3	1.9	1.7	1.5	1.1	1.0	1.0	1.2
Wood and paper	27.9	17.0	9.3	15.4	12.8	−26.9	−10.6	18.6	36.0	6.0	5.7	3.2	4.3	4.1	3.8	2.8	3.1	3.1	3.0
Light industry	26.3	8.3	7.3	11.0	7.9	−12.5	−25.6	−7.6	42.0	6.4	6.8	6.8	7.7	7.1	7.8	6.2	4.4	5.3	5.3
Food processing	14.2	5.8	7.0	3.3	−5.2	−30.1	26.1	20.1	48.0	35.5	23.3	13.2	12.3	10.0	8.7	9.0	....	10.0	14.3
Agriculture	54.5	−4.7	6.7	15.3	4.2	−34.4	28.8	30.2		7.4	8.3	3.3	4.2	3.8	3.1	3.0	11.7	3.6	
Total	7.7	9.8	7.3	12.9	16.7	−20.0	10.1	8.6	33.2	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: G.U.S. Rocznik statystyczny hadlu zagranicznego, 1981, Warsaw 1981, p. 12; 1984, pp. 8–9; G.U.S. Rocznik statystyczny 1982, Warsaw, 1982, pp. 308–310; Zycie gospodarcze, No. 6, 1983, p. 8; No. 41, 1983, p. 8; No. 44, 1983, p. 8.

N.B. Trade values expressed in domestic currency are upward affected by devaluations of zloty.

It appears, therefore, that Poland's situation with respect to external economic relations became almost impossible as the result of the imposition of martial law. Readmission to the IMF and the World Bank was blocked, government credits from the West were cut off and other sanctions restricted the availability of Western imports. At the same time, the Soviet leaders were not willing, or able, to advance any significant aid to reduce the adverse impact of martial law on economic relations with the West.

In order to overcome the current economic crisis and to ensure sustained recovery a certain critical mass of imports of raw materials, intermediate goods, components and spare parts is absolutely necessary. Only in this way the existing productive capacities in the manufacturing industry could be more fully utilized.[67] The necessary imports are not, however, fully obtainable from within the CMEA bloc. They must be imported from the West. Moreover, in the long run increases in national product will not only induce larger volumes of these imports, but also "the import of investment goods, especially from the West, will become necessary within 2–3 years at the latest for the replacement of used-up productive capacities and in order to build new export specialization".[68] However, so far it has been easier for Poland to expand export to socialist countries than to the rest of the world (see Table XI).

TABLE XI.—PROPORTION OF THE ANNUAL PLAN TARGETS FULFILLED IN EXPORT TO SOCIALIST AND OTHER COUNTRIES

[Billion zloty, current prices]

	Exports to socialist countries		Exports to other countries	
	1983	1984	1983	1984
Products of:				
Engineering	109.4	102.3	84.5	72.4
Fuels and energy	131.5	116.4	115.4	120.2
Metallurgical	73.2	92.4	122.3	101.3
Chemical industry	119.5	105.6	96.2	95.9
Mineral industry	127.7	218.8	67.5	108.6
Wood and paper industry	96.0	116.2	93.3	93.0
Light industry	86.8	110.2	110.0	121.4
Food and agricultural	186.0	164.3	108.9	107.0
Construction	86.1	141.7	60.4	95.9
Total export	108.8	103.8	98.4	97.6

Source: Zycie gospodarcze, No. 35, 1983, p. 8; No. 1, 1984, p. 9; No. 6, 1984, p. 8, No. 6, 1985, p. 14 and 1984.

In 1983 and 1984 the increase in export to the West was achieved mainly by overfulfilling the targets for the export of metallurgical products (seel and copper) and fuels and energy (coal and petroleum products based on imported oil), all heavily capital-intensive. Any further expansion of these exports would require large investment outlays, which at present cannot be financed from domestic saving. The other two groups of exports, which were successful in Western markets, are the commodities which are in short supply in the domestic market: the products of the light industry (textiles, leather products and clothing) and agricultural products. These two sectors of the economy have been badly neglected during the whole postwar period, their productive capacities have been rundown and need replacement and modernization. On the other hand, all those industries which were the main recipients of foreign embodied and disembodied technology, and had priority in the access to investment resources, are now experiencing difficulties in expanding their export to the West.

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[67] S. Gruzewski, "Zycie na przetrwanie" (A Matter of Survival), Handel zagraniczny, No. 6, 1983, p. 3.

[68] Ibid., p. 6.

Exports of engineering products, which in accordance with the "new development strategy" were expected to be the most important earners of foreign exchanges, are hampered in the Western markets by unsatisfactory quality, the lack of parts and services, inadequate marketing and insufficient contacts of the producers of exportables with the world markets. Exports of these products to the less developed countries cannot be expanded without providing credit and this is now impossible. Even exports to other socialist countries encounter serious difficulties. All CMEA countries attempt to balance their intra-bloc trade within the main groups of products. Poland's demand for machines has declined because of a drastic reduction in investment. Other CMEA countries are not, however, interested in expanding import of Polish machines in exchange for larger exports of materials.[69] Moreover, some of the potential exports of the Polish engineering industry cannot be produced without the import of parts and materials from the West, and without a continued inflow of Western technology they are rapidly becoming obsolete and lose their attractiveness also in the CMEA market.

The short-run situation is, therefore, very difficult. Because of the lack of necessary imports it is impossible to expand production, including production for export, and without an increase in exports it is impossible to finance imports. It is a vicious circle and it is doubtful that it could be broken without an injection of new credits which, as has been demonstrated recently, cannot be obtained from within the CMEA bloc. Moreover, in the longer run the expansion of export requires the creation of a pro-export industrial structure, a restructuring of the economy which was twice before attempted (at the end of the 1960's under Gomulka and at the beginning of the 1970's under Gierek).

With very limited capacity to generate domestic saving and, therefore, small investment funds, only a gradual restructuring would be possible when the national product would increase and exports could pay for the import of investment goods. As some Polish economists point out, the process would be facilitated if foreign capital could be attracted through "joint ventures" with the interested Western firms, but "this problem has not been solved so far," [70] i.e. the government has not been able to make any decision in this matter. Only the so called "Polonia firms" (owned by foreign citizens of Polish descent) have been allowed to operate. At the end of June 1983 there were 380 such firms, employing 19,631 persons (as compared with 12 million total employment in the country) and contributing 5.1% of the output of the "small production sector," or 0.5% of total production for the "domestic market" (i.e. for the population). Their history is not encouraging for any sort of industrial cooperation with foreign capital. In July 1983, one year after they had been allowed to operate, the legislation was changed to make their activities more restricted. Turnover tax on their products was raised from 6% to 70% and income tax on profits from 50% to 85%. In addition they have to pay a 50% tax on all exports. They can be exempted from taxation for 3 years but only if they invest at least one third of their profits in the country. The majority of the 340 new applications have been withdrawn in response to these changes and it is expected that a number of existing firms will close down, even when they produce goods that are in very short supply at present in Poland (for example socks and stockings).[71]

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[69] Ibid., p. 5.
[70] Ibid., p. 6.

Although the "Polonia firms" are small and relatively insignificant, they contribute goods for which there is demand and provide not only capital, but also technology, managerial factor and training of skilled workers. Above all, the change in the government attitude towards them creates an unfavourable climate for the expansion of other forms of industrial cooperation which may be very important in the present economic situation. Apparently the present leaders either are still not aware that in order to reestablish the links with the West, which were cut as the result of the imposition of martial law, there must be, above all, a change in political climate in Poland, or believe, contrary to the opinions of many Polish economists, that they do not need these links for the revival of the economy.

The expansion of export, especially to the West, also requires a sufficiently far reaching reform without which it is impossible to increase the flexibility of the economy or to make the correct decisions in the process of restructuring the economy and building of a viable export sector. Here the situation is also entirely unsatisfactory. In foreign trade planning, contrary to the previous declarations, the administrative command system has been fully maintained and in 1982–84 nothing was done which could induce the producers to give priority to export, or which would make export decisions to be based on profitability rather than on quantitative quotas.[72]

Officially a single rate of exchange of $1=80 zloty was introduced on January 1, 1982 (it was devaluated to $1=90 zloty on July 1, 1983)* and the foreign exchange currency, the so called "deviza zloty" was abolished. However, the centrally determined prices of basic materials had been calculated at the rate of $1=50 zloty (i.e., at a rate of exchange which was 40% lower than the accepted rate). As a revision of prices would have been very cumbersome, this abnormal situation has been maintained although it made correct economic calculations within the entire economy impossible.[73]

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[71] K. Jackowski, "Kon trojanski czy ostatnia deska ratunku?" (The Trojan horse or the Last Resort?), *Lad*, No. 45, 1983, pp. 1, 6.

[72] D. Ledworowski, "Instrumenty kierowania handlem zagranicznym," (The Steering Instruments in Foreign Trade), Handel zagraniczny, No. 9, 1983, p. 8.

*It was subsequently devaluated to 98.4, 110.0, and 123.0 (August 1984).

[73] Ibid., p. 9; J. Rewkowski, "Kurs walutowy a reforma gospodarca" (The Rate of Exchange and the Economic Reform), Handel zagraniczny, No. 7–8, 1983, pp. 9–15.

Again, it became in theory possible for the production enterprises, state, cooperative or even private, to obtain concessions to get involved directly in foreign trade without the obligatory use of the centralized foreign trade institutions. In practice the conditions which have to be fulfilled are so strict that "only a few big enterprises applied for a concession, and even fewer received it." [74]

Export has become subject to a special operational plan. It has been stimulated by administrative commands, the allocation of materials special tax deductions and the right to a certain proportion of earnings in foreign currencies which can be used for import or can be accumulated on a foreign exchange account. On the whole in the opinion of specialists in Poland, all these measures are "insufficient for the implementation of extremely difficult and demanding tasks in foreign trade" and "it is absolutely necessary to increase further the effectiveness of these measures." [75]

9. THE THREE YEAR PLAN FOR 1983-85

It is increasingly more evident that Poland's recovery depends on the possibility to expand foreign trade and that economic relations with the West must play an important role in this process. However, the leaders seem to ignore these facts and still act as if they were more interested in the reduction of foreign economic relations, especially with the West, than in promoting them in order to achieve fast improvement in the economic situation of the country. The basis for the present policy is "The Three Year Plan for 1983-85 and Indicators up to 1990" which, together with the anti-inflationary and saving programs forming its integral part, were formulated in 1982 and introduced in 1983.

The Plan is based on an assumption that the limited supply of materials will continue to represent the main barrier to growth. Because of the lack of investment resources, there exists only a minimal possibility to expand the output of raw materials. Taking into consideration various statements that are made in this connection, the shortage of investment may, in effect, save the country from another investment drive directed for the expansion of the "domestic raw material base." Very highly capital-intensive projects would be given again priority. Because of their long gestation period even stronger inflationary pressures would be created while the country would expand a high cost, inefficient production. This is exactly what happened during the 1950's, at the beginning of the 1960's and again at the beginning of the 1970's. It appears that this danger has now been averted only as the result of the shortage of investment funds. Apparently the planners have not learnt the lesson, despite the country's devastating past experience, that this may be the most expensive way of securing the necessary supply of raw materials.

Without sufficiently big investments, and with rapidly deteriorating conditions, the plan does not expect that the pre-crisis production level of fuels, raw materials and basic intermediate goods could be achieved by 1985 (see Table XII). The plan accepts, however, the necessity to maintain a high level of export of these materials in order to prevent a further deterioration in the balance of payments. At the same time, there are only limited possibilities, according to the plan, to import those materials which either are not produced within the country or are produced in insufficient quantities. These three limitations reduce the supply of materials for the manufacturing industry which is not, therefore, expected to achieve even the 1980 level (see Table XIII). For this reason the most important task of the plan is to impose a far reaching economy in the use of fuels, raw materials and intermediate goods.

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[74] Ledworoski, op. cit., p. 9.

[75] Wojciechowski, op. cit., pp. 7-8.

TABLE XII.—SOME INDICATORS OF THE THREE YEAR PLAN FOR 1983–85

	1978	1980	1981	1982	1985	1985 level with—		
						1982=100	1980=100	1978=100
Coal (m. tons)	192.6	193.1	163.0	189.3	186.0	98.3	96.3	96.4
Brown coal (m. tons)	41.0	36.9	35.6	36.6	53.0	141.0	143.6	129.3
Coke (m. tons)	20.2	19.8	17.9	17.3	18.1	104.6	91.2	89.6
Natural gas (m. cube meters)	7.9	6.4	6.2	5.4	5.4	100.0	84.3	68.4
Refined oil (m. tons)	17.0	16.1	13.9	13.4	15.4	114.9	95.4	90.6
Electric power (billion kw/hr.)	122.0	121.9	115.0	117.6	131.0	114.4	107.5	107.4
Rolled steel (m. tons)	13.6	13.3	11.1	10.4	12.0	115.9	90.3	86.2
Copper (thousand tons)	332.0	357.3	327.0	348.0	385.0	110.6	107.8	116.0
Zinc (thousand tons)	222.0	217.5	167.0	165.0	165.0	100.0	75.9	74.3
Lead (thousand tons)	86.7	82.0	69.0	78.8	71.0	90.1	86.6	81.9
Aluminium (thousand tons)	100.0	95.1	66.0	42.7	48.5	113.6	51.0	48.5
Silver (thousand tons)	680.0	766.0	640.0	655.0	710.0	108.9	92.7	104.4
Passenger cars (thousand)	326.0	351.1	240.0	229.1	311.0	135.7	88.5	95.4
Agriculture tractors (thousand)	59.5	57.5	50.5	53.0	66.5	125.5	115.7	111.8
Radio sets (thousand)	NA	215.5	NA	1500.0	2200.0	146.6	102.1	....
Pesticides (thousand tons)	NA	10.9	NA	9.3	11.0	118.3	100.9	....
Pharmaceuticals (billion zloty)	NA	36.9	NA	38.0	49.5	130.3	134.1	....
Furniture (billion zloty)	NA	95.3	NA	86.9	110.2	126.8	115.6	....
Cotton textiles (million m.)	919.0	901.2	788.0	693.1	823.5	118.8	91.4	89.6
Wool textiles (million m.)	124.0	121.1	106.0	91.3	106.0	116.1	87.5	85.5
Knitted products (million)	NA	373.8	NA	299.2	356.0	119.0	95.2	....
Shoes and boots (million pairs)	159.3	140.6	144.7	126.4	142.0	112.3	101.0	89.1

NA not available either in comparative units or definitions.

Sources: Zycie gospodarcze, No. 12, 1983, p. 8; G.U.S.,. Rocznik statystyczny przemyslu 1982 (Statistical Yearbook of Industry), Warsaw 1982, pp. 66–76.

TABLE XIII.—PLANNED CHANGES IN THE STRUCTURE OF GROSS INDUSTRIAL PRODUCTION AND NATIONAL NET MATERIAL PRODUCT

[1982 prices]

	1980		1982		1985	
	Billion zloty	Percent	Billion zloty	Percent	Billion zloty	Percent
Gross industrial product:						
Total industry	7,767	100.0	6,575	100.0	7,500	100.0
Fuels and power	1,053	13.6	1,002	15.2	1,080	14.4
Metallurgical	654	8.4	525	8.0	610	8.1
Engineering	1,819	23.4	1,558	23.7	1,900	25.3
Chemical	618	8.0	545	8.3	660	8.8
Mineral	284	3.7	246	3.7	270	3.6
Wood and paper	320	4.1	283	4.3	340	4.5
Light industry	764	9.8	623	9.5	707	9.4
Food processing	2,065	26.6	1,657	25.2	1,810	24.1
Other	190	2.5	136	2.1	123	1.6

TABLE XIII.—PLANNED CHANGES IN THE STRUCTURE OF GROSS INDUSTRIAL PRODUCTION AND NATIONAL NET MATERIAL PRODUCT—Continued

[1982 prices]

	1980		1982		1985	
	Billion zloty	Percent	Billion zloty	Percent	Billion zloty	Percent
National net material product:						
Total	5,540	100.0	4,365	100.0	4,735	100.0
Investment	1,457	26.3	869	19.9	947	20.0
Consumption from personal incomes	3,546	64.0	2,964	67.9	3,215	67.9
Other consumption	537	9.7	532	12.2	573	12.1

Source: *Zycie gospodarcze*, No. 12, 1983, pp. 8, 9.

The results of the plan depend on the success of this action. In 1983–85 industrial production is expected to increase by 14 to 15% with only a 7 to 9% increase in the supply of materials and in 1983–90 by 35 to 40% with the supply of 45 basic materials, both from domestic production and from import, not expected to increase by more than 15 to 20%. A reduction at this scale has never been achieved during the whole postwar period. A nonfulfillment of the task of improving efficiency in the use of fuels and materials must lead to a reduction in the assumed rate of growth and the levels of consumption and investment.[76] Even if the task is fully implemented, consumption from personal incomes is expected to represent less than 91% of the 1980 level and investment only 65%. Only "other consumption," which includes expenditures on education, health and social services, as well as on public administration, law and order and national defense is expected to increase by 6.7% in comparison with its 1980 level (see Table XIII).

Can even these modest targets be achieved? Some light is provided by a survey of 760 biggest industrial enterprises which was made by the Information Center of the Planning, Commission. The selected enterprises produce about 60% of total industrial output measured by "sold production" and use the majority of raw materials allocated to industry. They produce many raw materials as several of them belong to the extractive industries and power generation. According to the survey, in 1985 these enterprises' demand for materials will exceed their output by several percentage points. While in the central plan one percent of the increased industrial output is expected to be achieved with an increase in the use of materials by half of one percent, in the selected enterprises the ratio of materials to output is 1.2. For example, the central plan assumes an increase in the supply by 1.5% between 1982 and 1985, but the demand for coal by the selected enterprises, which use about 80% of its volume that is allocated for productive use in the economy, is about five times greater than the assumed output.

The supply of coal, natural gas, oil, rolled steel and non-ferrous metals will be considerably lower in 1985 than in 1980 and, in most cases, lower than in 1978, the last year before the decline in national product took place (see Table XII).

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[76] A. Karpinski, "Niektore ekonomiczne prolemy opracowania planu trzyletniego do 1985 roku i zalozen na okres do 1990 roku" (Some Economic Problems of the Preparation of the Three Year Plan for 1983–85 and Indicators up to 1990), Gospodarka planowa, No. 6, 1982, p. 211; "Narodowy Plan Spolcezno-Gospodarczy na lata 1983–85" (The National Socio-Economic Plan for 1983–85), Gospodaraka planowa, No. 7–8, 1983, p. 210.

During the debate on the plan in December 1982 the Sejm (Parliament) accepted as the main objectives: the task of feeding the population with a reduced import of food and other agricultural products; an improvement in housing conditions; an increase in the supply of basic consumption goods and the protection of the groups of population with the lowest incomes against the full impact of the crisis. The plan expects, for example, that goods and services for the use by population will increase by 23 to 24% with the increase of the total "sold industrial production" by 14 to 16%. However, the industries which produce consumption goods had a low priority in the past. Wages are still low there in comparison with the priority industries and they are experiencing shortages of labour. Similarly, they have the antiquated and run down machines and equipment which need replacement and modernization. The situation is especially bad in the textile industry where the output in 1985 is expected to be considerably below the 1980 and 1978 levels (see Table XII). Moreover, the enterprises of the engineering industry that produce machines for the consumption industry were also neglected and they are unable to meet the demand of those industries for more machines, especially for modern, material- and labour-saving machines. Finally, because of the prolonged shortage of industrial inputs for agriculture, and with the drastically restricted import of grain and feeds, there will be little improvement in the supply of food, which represents about half of total consumption goods. Particularly bad is the situation with the production of meat. State procurement of meat declined by 6.1% in 1983 and increased by only 0.1% in 1984.

To meet these various objectives the plan for 1983-85 accepts that the most important task for industry, in addition to expanding production, should be some structural changes. It is recognized that a period of three years is not long enough to implement a substantial restructuring, especially with very limited investment outlays. Some changes are, however, expected to start in as many as seven directions at once: (1) to convert industry so that it could increase the production of consumption goods, exportables and agricultural inputs; (2) to save foreign exchanges; (3) to abandon, whenever possible, the highly material- and energy-intensive production; (4) to establish complexes of production based on the available raw materials; (5) to ensure preference for the industries and products which are important for technological progress; (6) to replace raw material exports by the export of more highly processed products; (7) to give high priority to the production of spare parts and components at the expense of final products.[77]

None of these ideas are new. They have been repeated in leaders' declarations and plan objectives since the middle of the 1960's. Of course, they are all important but, in the present situation, the list is nothing more than wishful thinking. It is also too wide to be realistic. If priority is given to so many directions, in practice none of them has priority and efforts will simply be dispersed and wasted.

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[77] "Podstawowe uwarunkowania planu trzyletniego" (The Main Outline of the Three Year Plan), Zycie gospodarcze, No. 12, 1983, pp. 8-9.

Those responsible for implementation will select either those tasks from conflicting targets which are the easiest or which, at a given moment, would satisfy the superiors. These reactions are typical in the bureaucratic system and are well known in all Soviet-type economies. In Poland the same mistake was recently made with making too many "operational programs" and this fact has been severely criticized.[78]

These priorities, in effect cover everything: production of consumption goods, for export, import substitution, for agriculture, technologically advanced or stimulating technology products, expanding industrial complexes based on available raw materials. It is difficult to imagine what has been left out. The acceptance of the idea of priorities strengthens the command planning and management and the system of administrative allocation of resources to the "priority" fields. It is not compatible with the reform. It is clear that the new restructuring of the economy is again made "from above" by the central planners and does not differ from the efforts that were made in the late 1960's or early 1970's.

The very essence of the reform was supposed to be decentralization and the use of financial results of the enterprises, their autonomy, self government and self-financing. In this way unprofitable lines of production and enterprises were to be eliminated and those which are efficient were to be allowed to expand. The acceptance of the Three Year Plan in this particular formulation can be accepted as the death sentence for the reform.

Moreover, the actual planned structural changes ignore the priorities selected by the Sejm. In comparison with 1980 the share of fuels and power, engineering and chemical industries is supposed to expand in 1985 while that of the mineral industry, which includes building materials, light industry (textiles, leather goods, clothing) and food processing is to decline (see Table XIII).

Serious difficulties appeared already in 1983, the first year of the implementation of the plan. Although the "sold industrial production" increased by 5.8%, net production, which eliminates duplications and is net of material costs, increased by 4.7% in comparison with the exceptionally low 1982 level which had been depressed by the paralysis that followed the introduction of martial law. Accepting the value of "sold production" in the fourth quarter of 1982 as 100, the value in the first quarter 1983 represented 102.4, in the second quarter 100 and in the third only 96.5. The increase of 6.7 for the year as a whole in 1983 and 5.3 in 1984 does not seem to represent a sustained revival.[79]

Moreover, increase in production for the satisfaction of the needs of the population did not exceed that of total industrial output but represented only half of that rate of growth in industry as a whole. It is still easier to expand production of producers' goods than of consumption goods.[80]

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[78] J. Supera and A. Zaremba, "Programy operacyjne: idea rzeczywistosc" (Operational programs: the idea and the reality), Zycie gospodarcze, No. 22, 1982, p. 6.

[79] M. Misiak, "Uczymy sie, planowac" (We are learning to plan), Zycie gospodarcze, No. 48, 1983, p. 2.

[80] T. Jezioranski, "Uwaga na struktury" (Consider the Structure), Zycie gospodarcze, No. 49, 1983, p. 2.

The Sejm Committee on the Economic Plan, Budget and Finance declared at the end of 1983 that "the implementation of the central annual plan was unsatisfactory. especially in respect of the structure of industrial production, investment activity (mostly directed for the continuation of the old capital—, material—and energy-intensive investment projects that had been started during the 1970's and only 12% of total investment was allocated for modernization and replacement of used up capital); increases in retail prices; and material—and energy-intensity." Further it was observed that no improvement in planning had taken place, the reform was not implemented with full determination. The coordination of the systemic modifications with economic policy was too weak and the formulation of the plan for 1984 was also not consistent with the accepted objective of the Third Year Plan. Soon afterwards the chairman of the Planning Commission was replaced (the second change since Jaruzelski came to power), and the first deputy chairman and two other deputy chairmen were dismissed.[81]

10. ALTERNATIVE STRATEGIES

The imposition of martial law had a short-run adverse effect on the level of economic activity. By creating obstacles for foreign economic relations with the West, by limiting economic reform, and by antagonizing the population it has made the recovery more difficult in the long-run. At the same time it did not curb inflation and did not improve efficiency and since its lifting in July 1983 the situation has not improved. It appears that the objectives of the Three Year Plan will not be achieved. The plan was built on the assumption that a considerable reduction in material- and energy-intensity would take place. However, this had been attempted several times before and the planners had never been successful. There seems to be an almost general agreement among the Polish economists that no improvement in the use of materials and energy can be effected with the centralized administrative command system and it was one of the reasons why the economic reform was regarded as necessary.[82]

However, despite all the official declarations and a stream of legislation, the reform is not working. It has never been given an opportunity to work. Perhaps anticipating this development, the planners introduced two special programs as the support for the Three Year Plan. Both, the anti-inflationary and the saving programs are collections of administrative measures which are inconsistent with the reform. If these measures did not work in the past, why should they work now? At a meeting of the Committee for Economic Reform, which was held at the end of 1983, there was apparently a complete agreement that no progress had been made with the implementation of the anti-inflationary program.[83] There has also been no reduction in material- and energy-intensity and the pattern of growth continues to be extensive.[84]

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[81] *Ibid.*

[82] See, for example, a collection of essays U. Libura-Grzelonska (ed.), Ekonomisci oreformie gospodarczej: cele i zakres reformy gospodarczej (The Economists on Economic Reform: The Aims and the Scope of Economic Reform), v. I and II, Warsaw, 1981; R. Krawczyk (ed.), Reforma gospodarcza: propozycje, tendencje, kierunki dyskusji (Economic Reform: Proposals, Tendencies, Directions of Discussion), Warsaw 1981; J. Gliszczynski and M. Syrek, Maly leksykon wielkiej reformy (A Small Lexican of a Great Reform), Katowice 1983.

[83] T. Jezioranski, "Zdecyduje polityka gospodarcza" (Economic Policy Will be Decisive), Zycie gospodarcze, No. 47, 1983, p.2.

The economic situation at the end of 1983 deteriorated drastically: a decline in livestock; shortage of foreign exchanges; rationalization of employment and shortages of labour creating a serious barrier to growth; no desirable structural changes; no revision of the investment front and, above all, decapitalization throughout the economy and the lack of effective incentives.[85] The overall performance of the economy in 1984, despite some small improvements, was disappointing.[86]

It seems that the continuation of the present strategy would lead to prolonged stagnation. National product would be prevented from declining further, as this must have happened sooner or later, but this stabilization would be achieved at a very low per capita national income and consumption. It is quite likely that Jaruzelski's equipe will try to muddle through until the end of the Three Year Plan, continuing the present strategy and maintaining the present systemic hybrid, neither going ahead with the implementation of reform nor returning fully to the old centralized planning and management system, a situation that may be even worse than the inefficient old system. This policy implies not only considerable hardships and frustrations for the population but also the continuation of a potentially explosive situation.

However, as some calculations published in Poland indicate,[87] no recovery is possible with the present policy of attempting to repay the hard currency debt by maintaining low levels of import. Various forms of moratoria, or unilateral decisions to stop payments for a number of years, have been discussed in the Polish economic press.[88] A decision along these lines would probably be accompanied by a return to the traditional centralized system of planning and management with which it would, however, be impossible to effect recovery as the return to "the strong state of the 1950's . . . could not secure initiative, innovations and effectiveness." [89] Moreover, this decision would also probably lead to a higher degree of autarky and further attempts to redirect foreign trade in the direction of the CMEA countries. This strategy would result in an even greater deterioration of the economic situation, widening the technology gap between the West and Poland and a further reduction in the standard of living. Most likely it would lead to riots, which this time would be very serious. This outcome would not be in the interest of anybody.

The only strategy option that could give positive results would require moving in the opposite direction. It should include the acceptance of the view that sustained recovery in the present situa-

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[84] M. Misiak, "Wzrost i ograniczenie" (Growth and Limitations), Zycie gospodarcze, No. 39, 1983, p. 2.

[85] Jezioranski, "Zdecyduje . . . ," p. 2.

[86] M. Misiak, "Gospodarka w 1984r." (The Economy in 1984), Zycie gospodarcze, No. 4, 1985, M. 14-15.

[87] J. Kotowicz, Z. Sadowski, A. Szewrowski, "Wariant Refinansowania" (A Variant of Refinancing), Zycie gospodarcze, No. 32, pp. 1, 4.

[88] J. Kotowicz, Z. Sadowski, A. Szewrowski, "Wariant redukcji zadluzenia" (A Varient of the Reduction of Indebtedness), Zycie gospodarcze, No. 33, 1983, p. 13; S. Dlugosz, "Dylematy zadluzenia," Zycie gospodarcze, No. 50, 1983, p. 15.

[89] J. Pajestka, "Reforma wymaga misjonarzy" (The Reform Needs Missionaries), Zycie gospodarcze, No. 1, 1983, p. 1.

tion can only be ensured by the expansion of foreign economic relations, especially with the West. The opening of the economy and strengthening its links with the world economy, a real liberalization, marketization and decentralization of the economy are all the necessary conditions for recovery. The leaders would, however, need to obtain some support from the workers and other segments of the population and to create conditions for more favourable multilateral debt renegotiations, readmission to the IMF and the World Bank and access to some new credits. The solution of the current economic crisis in Poland depends, first of all, on political factors.

THE ADJUSTMENT OF THE POLISH ECONOMY TO SCARCITIES IN THE 1970'S

By Dan Kazmer*

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SUMMARY

This paper reports the progress of efforts to develop detailed GNP and foreign trade accounts for Poland in constant domestic currency, measures the adjustments that took place in the Polish economy in the 1970s in response to changing resource availabilities, and sorts out technological from other structural changes during the decade.

The tables are an important part of the paper. They provide consistent and comparable GNP and foreign trade accounts which were previously unavailable, allowing us to measure the adjustments of the Polish economy throughout the turbulent 1970s. Derivation of the tables was difficult, and all figures are provisional.

Measurement of the adjustments in the Polish economy year by year allows us to identify the following trends:

> Poland was an increasingly efficient user of its capital stock through 1975, but its efficiency began to decline in 1976. This decline worsened as capital was idled by both domestic disruptions and the worsening shortages of imported material inputs and parts;
>
> A trend toward increasing efficiency in labor use was reversed in 1979 when GNP dropped while most workers were kept on;

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Technological adjustments within the economy improved energy efficiency from 1971 to 1974, but efficiency deteriorated almost every year from 1975 to 1981;

The years 1971 through 1976 saw increasing dependence on hard currency imports, but from 1977 to 1981 the net effect of technological adjustments was to reduce the use of such imports;

Because of technological adjustments, the use of soft currency imports grew slightly in 1971, declined from 1972 to 1975 and then increased again from 1976 to 1981.

The Polish economy seems to respond unevenly to changing resource scarcities with technological adjustments, but it does respond. Indeed, it appears that no single resource represents a permanent economic constraint—not even oil or hard currency imports. Rather than scarcity of a single factor, rapidly changing scarcities are the major challenge to Poland's centrally directed economy in which foreign trade has a significant share in overall economic activity. The net effects of all the technological adjustments taking place in the economy are highly variable in both direction and magnitude. These technological adjustments and the complex tradeoffs in resource requirements associated with these adjustments can be subjected to further analysis now that they can be measured more accurately.

I. INTRODUCTION

The objective of this paper is the accurate measurement of the Polish economy's adjustment to changing scarcities of capital, labor, energy, and imports in the 1970s, not the causal linkage between Poland's debt crisis and those scarcities. Nor is this paper an assessment of the Polish economy or Poland's options in dealing with its debt burden.[1] Sections III and IV present detailed GNP and foreign trade accounts, which provide the basis for a more comprehensive assessment of overall Polish economic performance. Section V reviews the economy's use of capital, labor, and energy. Section VI combines these accounts with input-output techniques to develop an improved measure of Poland's economic adjustments to changing resource scarcities. Section VII draws conclusions. Appendix A documents the derivation of the GNP and foreign trade accounts. Appendix B presents the use of these accounts and input-output analysis to measure technological change.

A NOTE ON DATA AND DATA SOURCES

The GNP tables include data for the years 1970–81 for seven domestic end-uses and 34 domestic producing sectors. The foreign accounts cover exports and imports in 12 commodity categories. The import categories have been further divided into two components by origin: socialist (mostly soft currency trade) and nonsocialist (hard currency trade) countries.

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[1] Readers interested in an assessment of the Polish economy and its prospects should read "The Economic Crisis in Poland and Prospects for Recovery" by Zbigniew Fallenbuchl in this volume. Those concerned with "International Finance and Debt" and their impact on the Polish economy should refer to the half dozen papers in the section with that title in volume 2.

The input-output table is a 1977 official Polish table that has been extensively overhauled to be consistent with the GNP accounts. It has 58 producing sectors, 34 of which are domestic and 24 are import; 12 of the latter are hard currency product categories and 12 are soft currency. Input-output tables usually treat imports as negative entries in a final demand column. The unconventional treatment of imports as quasi-producing sectors permits input-output analysis to calculate import needs in the same way that it calculates domestic production needs. The final demand quadrant has been expanded to include seven domestic end-uses and twelve export categories. The third quadrant consists of capital stock and employment rows. Space limitations preclude including the table here, but it is available with documentation upon request.

We can accurately measure the economy's complex adjustments to changing scarcities using GNP and foreign trade accounts and an input-output table. GNP and foreign trade accounts are essential because they are complete, consistent, detailed, and allow calculation of tradeoffs between imports and domestic production. The input-output table is essential because it defines the technological relationships existing in the economy in the year of the table, in this case 1977. By applying standard input-output analysis, we can calculate the resource requirements of a given set of demands[2] placed on the economy assuming the 1977 technology reflected in the table. If this given set of demands is historical, say for 1980, then any difference between the resource requirements in the calculation and the resources actually used in 1980 must be due to technological change between 1977 and 1980. The year-to-year changes in the technology in use in the Polish economy are measured by the changing requirements for four major resources: capital stock, labor, energy (coal, oil, gas, hydro), and imports (hard currency, soft currency).

These calculations are not based on official Polish data because they suffer from discontinuities, changes in definition and coverage, and the peculiarities of the Marxist national income accounting framework. Furthermore, official statistics usually provide foreign trade and domestic production data in noncomparable currency units. The tables in this paper are a first effort to cut through these difficulties and provide consistent and detailed GNP and foreign trade accounts in constant domestic zlotys. Because this is a first effort, all figures are provisional.

II. SETTING THE SCENE

There were sharp shifts in Polish economic policy in the 1970s as a result of domestic political pressures and external shocks. After the workers' revolt in December 1970 brought Edward Gierek to power, the new regime proposed a new five-year plan for 1971–75, based on greater reliance on Western imports. The plan called for extensive modernization and growth of capital stock based on rapid growth of investment. Infusions of foreign technology and material inputs were to increase productivity and support rising real incomes. At the same time, Poland's coal intensive energy consumption was to shift toward more efficient oil and gas, imported largely from the USSR. Polish planners, along with much of the rest of the world, expected oil and gas use to expand until replaced by rapidly expanding nuclear power. By 1973 the Polish economy had developed significant momentum in three complementary directions: capital intensive economic growth; integration into the world economy; and the beginning of oil's substitution for coal in domestic energy consumption.

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[2] As will become apparent later on, the composition of those demands—consumption, investment, government, and exports of various commodities—is as important in determining resource needs as is the overall growth rate of those demands.

By the mid 1970s, however, the world economic environment had altered so drastically that all three goals became impractical. With the OPEC oil crisis, Soviet willingness to cushion the shock of the new oil scarcity only postponed the need to switch back to coal. Poland's planners also found themselves integrated into a world trading system populated, on the one hand by trading partners in the midst of recessions and, on the other hand, by efficient and aggressive newly industrializing countries competing for export markets. Furthermore, Polish determination to continue economic expansion, although at a reduced rate, virtually guaranteed that hard currency imports would dramatically outrun exports.

Polish economic policies and world economic conditions therefore combined to keep an effective constraint on Polish prosperity throughout the 1970s. At the start of the decade, modern and efficient capital goods were scarce in Poland. By the time Polish economic policies were galvanized to deal with the problem, energy, particularly oil, was the scarce resource. When Poland was finally able to begin adjusting its energy consumption to the new realities, hard currency imports, sharply curtailed by financial problems, had become the key factor in critical shortage. In the 1970s, in contrast to the previous two decades, export opportunities were contracting and competition in foreign markets increasing, while supplies of key inputs became uncertain. It is difficult to imagine an economic environment less suitable for sustained economic growth, particularly for a rigid central planning bureaucracy that does not adjust quickly.

III. Domestic End-Uses and Exports

Tables 1 and 2 record deliveries of goods and services from the Polish economy to final users, both domestic and foreign. Deliveries of goods and services to Polish domestic end-uses [3] grew on an average by 3 percent per year between 1971 and 1981, but there were sharp swings within this period. Gierek's ambitious development strategy led to rapid growth of deliveries to domestic end-uses in each year from 1971 through 1975, with the annual growth rate averaging 7.8 percent. From 1976 to 1978, growth slowed and in 1979 turned negative. By 1981, deliveries to domestic end-uses had been rolled back to their 1974–75 levels.

Personal consumption registered impressive growth from 1971 to 1977, but starting in 1978 nonfood, nonhousing personal consumption declined in each year through 1981. Growth in food consumption remained positive through 1979, but turned negative in 1980.

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[3] Domestic end-uses equal GNP plus imports minus exports.

Investment was the fastest growing component of domestic demand in the first half of the 1970s, averaging 15.4 percent per year, and bore the brunt of the adjustment effort in the second half of the decade, declining on average 6.7 percent per year from 1976 through 1981. The defense numbers are only "reasonable placeholders," but our calculations indicate that defense expenditures began to decline as early as 1974.[4] Only housing and civilian government expenditures registered positive growth throughout the decade. Since both of these are "nonproductive" in the Marxist accounting framework and therefore not counted, they comprise a major portion of the difference in growth rates between Marxist national income accounts and Western-type GNP accounts.

TABLE 1.—END-USE COMPONENTS OF POLISH GNP

[Million 1977 domestic zlotys]

	1970	1971	1972	1973	1974	1975
Total: End-use components	1,531,913.000	1,626,196.000	1,767,610.000	1,946,784.000	2,080,484.000	2,226,133.000
Percent change		6.155	8.696	10.137	6.868	7.001
Share	1.000	1.000	1.000	1.000	1.000	1.000
Personal consumption: Food	353,905.100	364,578.500	383,505.800	406,017.300	422,304.400	467,827.600
Percent change		3.016	5.192	5.870	4.011	10.780
Share	.231	.224	.217	.209	.203	.210
Personal consumption: Housing	170,750.100	175,864.900	178,978.500	182,470.400	185,139.200	193,311.900
Percent change		2.995	1.770	1.951	1.463	4.414
Share	.111	.108	.101	.094	.089	.087
Personal consumption: Other	359,865.400	370,718.500	389,964.600	412,855.300	429,416.800	475,706.700
Percent change		3.016	5.192	5.870	4.011	10.780
Share	.235	.228	.221	.212	.206	.214
Gross fixed capital formation	351,618.100	380,598.800	470,537.500	568,593.200	656,521.500	718,491.500
Percent change		8.242	23.631	20.839	15.464	9.439
Share	.230	.234	.266	.292	.316	.323
Government: Civilian	142,101.900	145,386.900	150,250.400	153,853.300	156,877.700	162,742.800
Percent change		2.312	3.345	2.398	1.966	3.739
Share	.093	.089	.085	.079	.075	.073
Government: Defense	72,201.750	79,578.750	80,331.750	81,173.380	77,726.880	80,200.380
Percent change		10.217	.946	1.048	−4.246	3.182
Share	.047	.049	.045	.042	.037	.036
Additions to inventories	81,473.880	109,472.000	114,043.400	141,822.000	152,500.400	127,854.900
Percent change		34.365	4.176	24.358	7.529	−16.161
Share	.053	.067	.065	.073	.073	.057
	1976	**1977**	**1978**	**1979**	**1980**	**1981**
Total: End-use components	2,309,350.000	2,354,854.000	2,368,262.000	2,284,135.000	2,229,747.000	2,110,325.000
Percent change	3.738	1.970	.569	−3.552	−2.381	−5.356
Share	1.000	1.000	1.000	1.000	1.000	1.000
Personal consumption: Food	499,937.800	524,547.100	528,697.700	535,006.200	534,206.100	507,618.400
Percent change	6.864	4.922	.791	1.193	.150	−4.977
Share	.216	.223	.223	.234	.240	.241
Personal consumption: Housing	202,080.900	213,349.900	215,898.700	220,285.600	229,260.900	238,274.100
Percent change	4.536	5.576	1.195	2.032	4.074	3.931
Share	.088	.091	.091	.096	.103	.113
Personal consumption: Other	523,280.900	563,396.400	546,343.300	539,668.300	523,210.700	497,252.900
Percent change	10.001	7.666	−3.027	−1.222	−3.050	−4.961
Share	.227	.239	.231	.236	.235	.236
Gross fixed capital formation	697,836.500	715,349.500	731,135.900	680,169.300	597,344.900	472,852.000
Percent change	−2.875	2.510	2.207	−6.971	−12.177	−20.841
Share	.302	.304	.309	.298	.268	.224

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[4] See Appendix A for a fuller explanation of defense data.

TABLE 1.—END-USE COMPONENTS OF POLISH GNP—Continued

[Million 1977 domestic zlotys]

	1976	1977	1978	1979	1980	1981
Government: Civilian	167,984.000	174,730.300	174,945.900	178,012.900	182,330.600	192,421.100
Percent change	3.221	4.016	.123	1.753	2.425	5.534
Share	.073	.074	.074	.078	.082	.091
Government: Defense	76,705.810	79,968.810	78,638.440	74,939.630	81,284.880	83,151.630
Percent change	−4.357	4.254	−1.664	−4.704	8.467	2.297
Share	.033	.034	.033	.033	.036	.039
Additions to inventories	141,526.300	83,514.000	92,605.900	56,055.790	82,112.500	118,756.200
Percent change	10.693	−40.990	10.887	−39.468	46.484	44.626
Share	.061	.035	.039	.025	.037	.056

TABLE 2.—POLISH EXPORTS

[Converted to million 1977 domestic zlotys]

	1970	1971	1972	1973	1974	1975
Total exports	270,495.100	286,000.600	331,071.800	365,806.800	403,161.900	433,775.300
Percent change		5.732	15.759	10.492	10.212	7.593
Export/GNP ratio	.174	.176	.190	.196	.204	.204
Share	1.000	1.000	1.000	1.000	1.000	1.000
Energy	56,616.810	59,169.420	65,424.160	71,580.810	80,945.690	79,456.000
Share	.209	.207	.198	.196	.201	.183
Metals	21,527.920	22,131.440	23,512.640	23,715.140	25,784.640	28,069.270
Share	.080	.077	.071	.065	.064	.065
Machinery	85,956.750	97,783.700	113,684.900	129,106.700	155,249.900	182,557.900
Share	.318	.342	.343	.353	.385	.421
Chemicals	21,050.570	23,308.030	28,149.160	33,201.860	33,144.220	34,511.880
Share	.078	.081	.085	.091	.082	.080
Mineral products	2,057.342	2,485.844	2,655.172	2,588.591	2,374.965	3,155.291
Share	.008	.009	.008	.007	.006	.007
Wood and paper products	11,784.920	10,783.730	12,205.070	13,443.820	10,682.530	10,211.150
Share	.044	.038	.037	.037	.026	.024
Light industry	22,006.410	24,566.850	28,086.800	32,967.840	36,125.000	39,871.820
Share	.081	.086	.085	.090	.090	.092
Processed foods	31,493.550	31,180.110	35,419.680	40,708.320	41,681.560	37,642.570
Share	.116	.109	.107	.111	.103	.087
Other industry	1,837.828	1,533.079	1,855.312	2,117.464	2,135.989	2,008.320
Share	.007	.005	.006	.006	.005	.005
Agricultural products	14,439.910	11,310.840	17,915.400	13,875.100	12,777.020	13,639.720
Share	.053	.040	.054	.038	.032	.031
Forest products	1,566.906	1,611.653	2,015.465	2,343.104	2,109.081	2,445.012
Share	.006	.006	.006	.006	.005	.006
Other products and services	156.474	136.225	148.326	158.263	151.596	206.614
Share	.001	.000	.000	.000	.000	.000

	1976	1977	1978	1979	1980	1981
Total exports	454,885.100	442,140.900	510,632.100	540,654.700	526,100.400	420,534.900
Percent change	4.867	−2.802	15.491	5.879	−2.692	−20.066
Export/GNP ratio	.209	.199	.222	.239	.239	.202
Share	1.000	1.000	1.000	1.000	1.000	1.000
Energy	80,519.440	78,400.190	76,869.560	75,731.500	68,331.000	33,548.500
Share	.177	.177	.151	.140	.130	.080
Metals	28,344.590	31,102.840	35,358.590	36,210.290	39,000.730	32,422.300
Share	.062	.070	.069	.067	.074	.077
Machinery	188,832.300	182,892.900	229,661.900	259,907.900	258,330.500	232,259.100
Share	.415	.414	.450	.481	.491	.552
Chemicals	39,340.230	38,426.640	42,688.530	40,676.440	42,373.380	34,886.400
Share	.086	.087	.084	.075	.081	.083

TABLE 2.—POLISH EXPORTS—Continued

[Converted to million 1977 domestic zlotys]

	1976	1977	1978	1979	1980	1981
Mineral products	3,655.276	4,835.848	5,598.719	4,615.285	3,845.835	3,765.000
Share	.008	.011	.011	.009	.007	.009
Wood and paper products	1,832.720	11,104.860	13,793.780	14,033.360	12,625.960	10,737.000
Share	.026	.025	.027	.026	.024	.026
Light industry	41,656.340	40,980.100	48,193.470	47,318.000	46,075.780	36,630.000
Share	.092	.093	.094	.088	.088	.087
Processed foods	42,978.810	36,398.330	42,249.990	42,982.520	37,547.810	23,089.100
Share	.094	.082	.083	.080	.071	.055
Other industry	2,177.509	2,305.986	2,568.353	2,866.618	2,946.935	2,682.700
Share	.005	.005	.005	.005	.006	.006
Agricultural products	13,174.950	13,265.050	11,291.360	13,446.090	11,930.450	7,280.000
Share	.029	.030	.022	.025	.023	.017
Forest products	2,193.720	2,249.734	2,064.898	1,997.528	2,512.381	2,553.200
Share	.005	.005	.004	.004	.005	.006
Other products and services	179.553	178.792	293.261	869.534	679.882	681.800
Share	.000	.000	.001	.002	.001	.002

Just as growth rates in boom years are less impressive in Western-type GNP accounts than in Marxist national income accounts, the recession years 1979–81 show less precipitous declines in GNP terms.

Polish exports in constant 1977 domestic zlotys (Table 2) boomed from 1971 to 1976, with annual rates of growth averaging 9.0 percent. After declining slightly in 1977, exports bounced back in 1978–79. A slump followed in 1980, and in 1981 exports declined by 20 percent, largely because sales abroad of coal, processed foods, and agricultural products plummeted. Exports are a particular problem for a centrally planned economy since their level and composition depend as much on the vagaries of foreign markets as on the decisions of planners to produce for export. The share of exports in aggregate demand (domestic end-uses plus exports) ranged from a low of 15 percent in 1970 and 1971 to a high of 19 percent in 1979. The volatility of exports (measured as the ratio of the standard deviation to the mean) is 50 percent greater than the volatility of domestic demand—a strong indicator of the extra uncertainties that exports impose on Polish planners.

IV. SUPPLY RESPONSES: DOMESTIC PRODUCTION AND IMPORTS

As demand expanded, total GNP grew at an impressive 6.5 percent annual average in 1971–75; the rate of growth dropped to an annual average 2.6 percent in 1976–78, turned negative in 1979, and dropped sharply in 1981. Overall, the decade was marked by relatively high growth in electricity generation, transportation and communications, trade and distribution, miscellaneous products and services, and housing. Relatively slow growth occurred in machinery, electrical equipment, and agriculture. The sectors whose value-added declined the most from 1979 to 1981 were fuels, metals, and equipment. Table 3 chronicles the domestic production response to demands by reporting the value-added in 34 producing sectors.

TABLE 3.—THE SECTOR-OF-ORIGIN COMPONENTS OF POLISH GNP

[Million 1977 domestic zlotys]

	1970	1971	1972	1973	1974	1975
Total GNP	1,551,778.000	1,623,054.000	1,741,300.000	1,869,502.000	1,980,276.000	2,125,726.000
Percent change		4.593	7.285	7.362	5.925	7.345
Share	1.000	1.000	1.000	1.000	1.000	1.000
Coal	47,528.310	50,958.800	53,794.870	56,229.030	59,795.100	63,098.280
Percent change		7.218	5.565	4.525	6.342	5.524
Share	.031	.031	.031	.030	.030	.030
Oil	1,284.905	1,256.675	1,133.288	1,318.040	1,930.786	1,954.450
Percent change		−2.197	−9.189	16.302	46.489	1.226
Share	.001	.001	.001	.001	.001	.001
Gas	11,201.020	12,099.160	13,271.410	13,862.150	13,933.850	14,683.020
Percent change		8.018	9.689	4.451	.517	5.377
Share	.007	.007	.008	.007	.007	.007
Electricity	20,716.450	23,136.720	25,726.830	28,599.600	31,970.770	33,867.870
Percent change		11.683	11,195	11.166	11.787	5.934
Share	.013	.014	.015	.015	.016	.016
Ferrous metals	32,022.050	34,332.610	37,393.070	38,983.960	41,464.490	43,168.890
Percent change		7.215	8.914	4.254	6.363	4.110
Share	.021	.021	.021	.021	.021	.020
Nonferrous metals	8,777.953	10,150.530	11,828.240	12,923.660	14,913.600	17,149.860
Percent change		15.637	16.528	9.261	15.398	14.995
Share	.006	.006	.007	.007	.008	.008
Metalworking	27,781.130	30,148.000	32,380.260	35,466.710	39,276.130	41,060.100
Percent change		8.520	7.404	9.532	10.741	4.542
Share	.018	.019	.019	.019	.020	.019
Machinery	66,299.000	69,623.380	71,232.380	79,111.630	84,984.250	88,890.880
Percent change		5.014	2.311	11.061	7.423	4.597
Share	.043	.043	.041	.042	.043	.042
Precision instruments	6,500.594	6,791.039	7,961.215	8,702.477	9,554.840	10,276.320
Percent change		4.468	17.231	9.311	9.794	7.457
Share	.004	.004	.005	.005	.005	.005
Transport equipment	34,286.760	39,259.590	44,834.960	50,068.840	52,494.510	64,275.310
Percent change		14.504	14.201	11.674	4.845	22.442
Share	.022	.024	.026	.027	.027	.030
Electric equipment	29,641.690	31,992.360	34,660.300	35,150.850	37,572.330	40,579.650
Percent change		7.930	8.339	1.415	6.889	8.004
Share	.019	.020	.020	.019	.019	.019
Chemicals	37,261.610	40,812.600	44,511.210	48,817.130	55,181.900	57,874.320
Percent change		9.530	9.062	9.674	13.038	4.879
Share	.024	.025	.026	.026	.028	.027
Construction materials	23,389.760	24,734.690	25,653.260	27,619.290	28,762.940	31,790.240
Percent change		5.750	3.714	7.664	4.141	10.525
Share	.015	.015	.015	.015	.015	.015
Glass and ceramics	5,275.117	6,051.125	6,509.531	7,225.086	8,036.211	8,774.855
Percent change		14.711	7.576	10.992	11.226	9.191
Share	.003	.004	.004	.004	.004	.004
Wood products	13,089.470	14,136.680	15,246.480	16,943.100	19,137.620	21,750.780
Percent change		8.000	7.850	11.128	12.952	13.655
Share	.008	.009	.009	.009	.010	.010
Paper	5,540.590	6,187.492	6,770.168	7,145.777	7,705.367	7,939.578
Percent change		11.676	9.417	5.548	7.831	3.040
Share	.004	.004	.004	.004	.004	.004
Textiles	40,361.320	42,854.740	45,642.260	47,400.990	50,342.410	53,126.770
Percent change		6.178	6.505	3.853	6.205	5.531
Share	.026	.026	.026	.025	.025	.025
Clothing	13,870.970	15,117.260	16,184.450	17,153.940	18,504.240	19,333.390
Percent change		8.985	7.059	5.990	7.872	4.481
Share	.009	.009	.009	.009	.009	.009
Leather products	11,397.920	11,872.980	13,108.400	13,964.010	15,516.870	15,619.770
Percent change		4.168	10.405	6.527	11.120	.663
Share	.007	.007	.008	.007	.008	.007
Processed foods	47,106.410	51,117.050	56,765.200	62,306.770	67,941.440	71,252.690

TABLE 3.—THE SECTOR-OF-ORIGIN COMPONENTS OF POLISH GNP—Continued

[Million 1977 domestic zlotys]

	1970	1971	1972	1973	1974	1975
Percent change		8.514	11.049	9.762	9.043	4.874
Share	.030	.031	.033	.033	.034	.034
Other industry	10,111.940	10,692.340	11,520.730	11,965.460	13,723.440	13,959.760
Percent change		5.740	7.747	3.860	14.692	1.722
Share	.007	.007	.007	.006	.007	.007
Construction	81,772.630	91,092.700	100,604.100	122,040.000	142,446.400	151,512.700
Percent change		11.397	10.441	21.307	16.721	6.365
Share	.053	.056	.058	.065	.072	.071
Agriculture: Crops	496,782.500	471,577.600	496,298.600	523,052.500	505,036.700	553,210.600
Percent change		−5.074	5.242	5.391	−3.444	9.539
Share	.320	.291	.285	.280	.255	.260
Agriculture: Animal products	6,170.047	6,814.668	7,551.398	8,296.203	9,167.630	8,692.797
Percent change		10.448	10.811	9.863	10.504	−5.179
Share	.004	.004	.004	.004	.005	.004
Agriculture: Services	4,073.700	4,259.684	4,639.789	5,028.984	5,337.836	5,281.570
Percent change		4.565	8.923	8.388	6.141	−1.054
Share	.003	.003	.003	.003	.003	.002
Foresty	10,088.080	10,387.760	10,373.550	11,212.720	12,475.530	13,341.490
Percent change		2.971	−.137	8.089	11.262	6.941
Share	.007	.006	.006	.006	.006	.006
Transport and communications	78,260.060	90,447.300	103,372.400	113,619.900	135,692.500	154,215.200
Percent change		15.573	14.290	9.913	19.427	13.650
Share	.050	.056	.059	.061	.069	.073
Trade and distribution	75,199.630	83,201.250	94,768.300	105,340.200	117,132.200	128,380.000
Percent change		10.640	13.902	11.155	11.194	9.603
Share	.048	.051	.054	.056	.059	.060
Other material products and services	42,166.870	44,515.950	47,680.010	50,551.220	54,272.950	58,323.080
Percent change		5.571	7.108	6.022	7.362	7.463
Share	.027	.027	.027	.027	.027	.027
Housing	143,966.100	155,959.900	161,539.400	166,387.700	174,777.600	179,054.300
Percent change		8.331	3.578	3.001	5.042	2.447
Share	.093	.096	.093	.089	.088	.084
Other nonmaterial services	23,284.340	24,277.450	24,937.510	25,422.910	26,442.940	26,696.400
Percent change		4.265	2.719	1.946	4.012	.958
Share	.015	.015	.014	.014	.013	.013
Government: Human investment	41,995.070	48,224.440	51,393.120	53,918.190	56,931.830	58,641.420
Percent change		14.834	6.571	4.913	5.589	3.003
Share	.027	.030	.030	.029	.029	.028
Government: Health and human services	23,637.710	26,236.930	27,953.660	29,411.020	31,516.910	32,946.310
Percent change		10.996	6.543	5.213	7.160	4.535
Share	.015	.016	.016	.016	.016	.015
Government: Administration and Military	30,941.850	32,740.310	34,065.770	34,268.030	36,310.470	35,017.140
Percent change		5.812	4.048	.594	5.960	−3.562
Share	.020	.020	.020	.018	.018	.016

	1976	1977	1978	1979	1980	1981
Total GNP	2,178,868.000	2,219,261.000	2,297,908.000	2,257,519.000	2,200,119.000	2,081,086.000
Percent change	2.500	1.854	3.544	−1.758	−2.543	−5.410
Share	1.000	1.000	1.000	1.000	1.000	1.000
Coal	64,526.760	68,547.000	71,200.130	73,384.000	70,125.940	57,956.430
Percent change	2.264	6.230	3.870	3.067	−4.440	−17.354
Share	.030	.031	.031	.033	.032	.028
Oil	1,537.022	1,250.079	1,176.002	1,174.659	1,271.977	1,083.425
Percent change	−21.358	−18.669	−5.926	−.114	8.285	−14.824
Share	.001	.001	.001	.001	.001	.001
Gas	15,893.140	17,386.920	18,113.500	17,535.990	16,753.760	14,456.450
Percent change	8.242	9.411	4.167	−3.188	−4.461	−13.712
Share	.007	.008	.008	.008	.008	.007

TABLE 3.—THE SECTOR-OF-ORIGIN COMPONENTS OF POLISH GNP—Continued

[Million 1977 domestic zlotys]

	1976	1977	1978	1979	1980	1981
Electricity	35,666.980	38,361.000	40,716.340	41,087.970	42,370.280	38,893.200
Percent change	5.312	7.553	6.140	.913	3.121	−8.206
Share	.016	.017	.018	.018	.019	.019
Ferrous metals	41,938.880	43,550.000	46,965.860	47,043.680	48,752.100	38,562.450
Percent change	−2.849	3.842	7.843	.166	3.631	−20.901
Share	.019	.020	.020	.021	.022	.019
Nonferrous metals	18,010.290	19,615.000	20,773.820	21,081.280	21,711.910	18,846.230
Percent change	5.017	8.910	5.908	1.480	2.991	−13.199
Share	.008	.009	.009	.009	.010	.009
Metalworking	42,231.900	44,027.000	45,418.870	44,621.990	43,380.230	35,842.360
Percent change	2,854	4.251	3.161	−1.755	−2.783	−17.376
Share	.019	.020	.020	.020	.020	.017
Machinery	80,501.880	80,010.000	78,553.880	77,959.500	77,241.630	63,369.270
Percent change	−9.437	−.611	−1.820	−.757	−.921	−17.960
Share	.037	.036	.034	.035	.035	.030
Precision instruments	10,923.790	11,340.000	11,554.500	11,394.950	10,652.860	8,394.961
Percent change	6.394	3.810	1.892	−1.381	−6.512	−21.195
Share	.005	.005	.005	.005	.005	.004
Transport equipment	62,064.700	67,043.000	67,459.130	62,240.350	57,647.410	44,075.550
Percent change	−3.439	8.021	.621	−7.736	−7.379	−23.543
Share	.028	.030	.029	.028	.026	.021
Electric equipment	38,784.980	36,648.000	38,076.350	33,960.560	30,808.390	25,819.410
Percent change	−4.423	−5.510	3.897	−10.809	−9.282	−16.194
Share	.018	.017	.017	.015	.014	.012
Chemicals	58,672.360	60,716.000	60,331.430	58,771.520	59,701.110	51,137.370
Percent change	1.379	3.483	−.633	−2.586	1.582	−14.344
Share	.027	.027	.026	.026	.027	.025
Construction materials	30,571.850	32,551.000	31,629.190	29,124.950	26,958.070	21,892.050
Percent change	−3.833	6.474	−2.832	−7.918	−7.440	−18.792
Share	.014	.015	.014	.013	.012	.011
Glass and ceramics	8,811.352	9,465.000	9,911.690	10,155.780	10,360.240	8,884.004
Percent change	.416	7.418	4.719	2.463	2.013	−14.249
Share	.004	.004	.004	.004	.005	.004
Wood products	23,590.620	26,454.000	27,512.580	27,129.800	27,943.030	24,914.890
Percent change	8.459	12.138	4.002	−1.391	2.997	−10.837
Share	.011	.012	.012	.012	.013	.012
Paper	8,259.848	8,857.000	8,774.383	8,253.871	8,396.133	7,192.477
Percent change	4.034	7.230	−.933	−5.932	1.724	−14.336
Share	.004	.004	.004	.004	.004	.003
Textiles	54,538.460	57,340.000	58,820.210	57,149.010	56,711.760	48,076.090
Percent change	2.657	5.137	2.581	−2.841	−.765	−15.227
Share	.025	.026	.026	.025	.026	.023
Clothing	19,542.950	20,380.000	20,584.270	20,816.520	20,194.380	17,345.380
Percent change	1.084	4.283	1.002	1.128	−2.989	−14.108
Share	.009	.009	.009	.009	.009	.008
Leather products	16,173.050	16,198.000	16,393.480	16,441.850	16,471.210	14,528.720
Percent change	3.542	.154	1.207	.295	.179	−11.793
Share	.007	.007	.007	.007	.007	.007
Processed foods	73,677.190	75,759.000	78,760.690	79,314.310	75,516.380	70,250.380
Percent change	3.403	2.826	3.962	.703	−4.788	−6.973
Share	.034	.034	.034	.035	.034	.034
Other industry	14,925.410	15,448.000	16,160.470	16,388.850	16,043.020	15,428.780
Percent change	6.917	3.501	4.612	1.413	−2.110	−3.829
Share	.007	.007	.007	.007	.007	.007
Construction	157,326.500	160,325.000	160,396.400	151,733.000	144,202.700	118,004.500
Percent change	3.827	1.906	.044	−5.401	−4.963	−18.168
Share	.072	.072	.070	.067	.066	.057
Agriculture: Crops	589,360.800	554,520.800	592,733.100	570,540.700	526,952.800	593,380.800
Percent change	6.535	−5.911	6.891	−3.744	−7.640	12.606
Share	.270	.250	.258	.253	.240	.285
Agriculture: Animal products	7,871.781	8,838.270	9,641.760	9,373.380	9,426.310	7,526.496

TABLE 3.—THE SECTOR-OF-ORIGIN COMPONENTS OF POLISH GNP—Continued

[Million 1977 domestic zlotys]

	1976	1977	1978	1979	1980	1981
Percent change	−9.445	12.278	9.091	−2.784	.565	−20.154
Share	.004	.004	.004	.004	.004	.004
Agriculture: Services	5,072.191	5,343.934	5,789.805	5,610.004	5,488.406	4,947.520
Percent change	−3.964	5.357	8.343	−3.105	−2.168	−9.855
Share	.002	.002	.003	.002	.002	.002
Forestry	12,974.470	13,513.000	13,125.510	13,427.830	14,295.010	13,988.270
Percent change	−2.751	4.151	−2.868	2.303	6.458	−2.146
Share	.006	.006	.006	.006	.006	.007
Transportation and communications	162,407.400	175,606.000	185,711.200	183,532.300	186,160.900	155,858.000
Percent change	5.312	8.127	5.754	−1.173	1.432	−16.278
Share	.075	.079	.081	.081	.085	.075
Trade and distribution	131,538.900	138,949.000	139,801.600	139,259.100	137,939.600	125,514.000
Percent change	2.460	5.633	.614	−.388	.948	−9.008
Share	.060	.063	.061	.062	.063	.060
Other material products and services	58,840.560	61,774.000	64,101.630	65,957.630	68,251.880	69,126.690
Percent change	.887	4.985	3.768	2.895	3.478	1.282
Share	.027	.028	.028	.029	.031	.033
Housing	181,171.200	191,091.000	196,794.700	200,156.900	204,355.700	203,017.500
Percent change	1.182	5.475	2.985	1.708	2.098	−.655
Share	.083	.086	.086	.089	.093	.098
Other nonmaterial services	25,200.720	26,287.000	26,858.070	27,163.840	27,565.700	27,628.110
Percent change	−5.603	4.311	2.172	1.138	1.479	.226
Share	.012	.012	.012	.012	.013	.013
Government: Human investment	58,256.060	59,703.000	60,560.650	60,867.620	61,251.230	61,265.260
Percent change	−.657	2.484	1.437	.507	.630	.023
Share	.027	.027	.026	.027	.028	.029
Government: Health and human services	33,562.590	35,924.000	36,910.130	37,787.960	38,522.130	39,081.150
Percent change	1.871	7.036	2.745	2.378	1.943	1.451
Share	.015	.016	.016	.017	.018	.019
Government: Administration and military	34,447.600	36,440.000	36,603.690	37,084.460	36,701.110	34,802.330
Percent change	−1.626	5.784	.449	1.313	−1.034	−5.174
Share	.016	.016	.016	.016	.017	.017

TABLE 4.—POLISH HARD CURRENCY IMPORTS

[Converted to million 1977 domestic zlotys]

	1970	1971	1972	1973	1974	1975
Total: Hard currency imports	93,507.800	113,706.300	168,502.400	236,278.200	276,440.800	309,986.500
Percent change		21.601	48.191	40.222	16.998	12.135
Import/GNP ratio	.060	.070	.097	.126	.140	.146
Share	1.000	1.000	1.000	1.000	1.000	1.000
Energy	2,234.644	2,973.904	3,339.809	8,953.375	7,575.699	12,949.590
Share	.024	.026	.020	.038	.027	.042
Metals	12,966.440	16,396.760	22,553.190	37,184.180	54,016.950	50,076.590
Share	.139	.144	.134	.157	.195	.162
Machinery	25,055.280	31,672.580	61,658.680	93,875.700	111,957.400	130,400.500
Share	.268	.279	.366	.397	.405	.421
Chemicals	13,973.630	17,978.440	23,491.390	26,890.360	34,456.480	38,218.070
Share	.149	.158	.139	.114	.125	.123
Mineral products	1,982.756	1,502.438	2,762.124	3,311.507	3,082.135	2,705.149
Share	.021	.013	.016	.014	.011	.009
Wood and paper products	3,272.119	3,058.765	3,586.832	4,498.133	5,225.453	4,849.422
Share	.035	.027	.021	.019	.019	.016
Light industry	7,582.820	7,767.527	11,929.910	15,086.010	15,342.940	16,270.970
Share	.081	.068	.071	.064	.056	.052

TABLE 4.—POLISH HARD CURRENCY IMPORTS—Continued

[Converted to million 1977 domestic zlotys]

	1970	1971	1972	1973	1974	1975
Processed foods	9,685.790	14,849.030	13,392.720	17,144.860	15,939.720	18,304.340
Share	.104	.131	.079	.073	.058	.059
Other industry	2,559.721	2,863.722	4,447.957	5,165.395	5,451.930	4,140.813
Share	.027	.025	.026	.022	.020	.013
Agicultural products	13,918.260	14,234.660	20,912.960	23,400.480	22,971.530	31,786.890
Share	.149	.125	.124	.099	.083	.103
Forest products	268.416	396.059	407.770	745.172	404.236	244.108
Share	.003	.003	.002	.003	.001	.001
Other products and services	8.107	12.747	19.405	23.316	16.567	40.346
Share	0	0	0	0	0	0
	1976	1977	1978	1979	1980	1981
Total: Hard currency imports	346,169.100	308,942.900	302,514.800	285,032.800	264,605.000	182,907.100
Percent change	11.672	−10.754	−2.081	−5.779	−7.167	−30.875
Import/GNP ratio	.159	.139	.132	.126	.120	.088
Share	1.000	1.000	1.000	1.000	1.000	1.000
Energy	15,767.450	15,052.040	13,272.700	15,101.610	14,298.950	3,756.870
Share	.046	.049	.044	.053	.054	.021
Metals	55,883.800	43,329.640	38,638.460	34,133.290	26,248.990	10,866.300
Share	.161	.140	.128	.120	.099	.059
Machinery	128,226.300	111,286.800	100,737.300	78,776.440	67,223.250	38,205.640
Share	.370	.360	.333	.276	.254	.209
Chemicals	43,233.560	44,478.310	46,146.490	47,108.190	45,284.140	25,874.850
Share	.125	.144	.153	.165	.171	.141
Mineral products	4,333.965	4,096.559	4,406.656	4,078.575	3,256.307	2,672.553
Share	.013	.013	.015	.014	.012	.015
Wood and paper products	5,165.980	4,373.426	4,042.100	5,716.238	4,252.176	210.210
Share	.015	.014	.013	.020	.016	.001
Light industry	15,684.610	13,749.110	12,444.600	15,556.970	14,592.770	9,290.150
Share	.045	.045	.041	.055	.055	.051
Processed foods	21,720.020	27,286.000	25,947.200	31,352.820	34,030.320	45,925.990
Share	.063	.088	.086	.110	.129	.251
Other industry	4,764.203	5,385.898	5,779.656	5,763.996	3,448.928	2,688.868
Share	.014	.017	.019	.020	.013	.015
Agricultural products	51,037.070	39,575.290	50,820.930	47,148.800	51,707.200	43,209.540
Share	.147	.128	.168	.165	.195	.236
Forest products	314.917	300.464	243.485	253.938	217.828	171.990
Share	.001	.001	.001	.001	.001	.001
Other products and services	37.557	29.900	35.645	42.223	44.476	34.528
Share	0	0	0	0	0	0

TABLE 5.—POLISH SOFT CURRENCY IMPORTS

[Converted to million 1977 domestic zlotys]

	1970	1971	1972	1973	1974	1975
Total: Soft currency imports	157,125.600	175,437.400	188,879.700	206,811.800	226,930.900	224,198.100
Percent change		11.654	7.662	9.494	9.728	−1.204
Import/GNP ratio	.101	.108	.108	.111	.115	.105
Share	1.000	1.000	1.000	1.000	1.000	1.000
Energy	30,023.870	31,198.050	35,428.820	36,743.900	35,562.930	39,592.470
Share	.191	.178	.188	.178	.157	.177
Metals	30,607.200	30,387.150	32,032.170	33,399.000	35,142.600	36,429.730
Share	.195	.173	.170	.161	.155	.162
Machinery	52,120.990	55,367.500	66,624.250	84,211.000	96,521.600	88,329.940
Share	.332	.316	.353	.407	.425	.394
Chemicals	9,961.680	11,554.720	12,696.390	15,109.710	17,013.270	19,501.480
Share	.063	.066	.067	.073	.075	.087

TABLE 5.—POLISH SOFT CURRENCY IMPORTS—Continued

[Converted to million 1977 domestic zlotys]

	1970	1971	1972	1973	1974	1975
Mineral products	3,484.151	3,549.552	4,206.551	5,122.973	4,580.363	4,377.168
Share	.022	.020	.022	.025	.020	.020
Wood and paper products	4,269.410	5,508.586	4,928.172	5,025.074	5,530.273	5,954.773
Share	.027	.031	.026	.024	.024	.027
Light industry	8,707.313	9,755.860	10,524.460	8,450.398	8,643.695	9,209.940
Share	.055	.056	.056	.041	.038	.041
Processed foods	6,149.426	8,958.180	8,702.438	7,198.426	6,397.703	7,558.402
Share	.039	.051	.046	.035	.028	.034
Other industry	1,854.897	2,250.158	2,507.925	2,614.810	2,760.927	2,443.274
Share	.012	.013	.013	.013	.012	.011
Agricultural products	9,460.900	16,483.850	10,865.140	8,692.141	14,438.040	10,468.380
Share	.060	.094	.058	.042	.064	.047
Forest products	449.318	395.806	328.220	194.783	301.223	300.037
Share	.003	.002	.002	.001	.001	.001
Other products and services	36.787	28.411	35.443	49.819	38.537	32.752
Share	0	0	0	0	0	0

	1976	1977	1978	1979	1980	1981
Total: Soft currency imports	239,197.900	268,792.800	278,473.800	282,238.300	291,124.600	266,867.800
Percent change	6.690	12.372	3.602	1.352	3.148	−8.332
Import/GNP ratio	.110	.121	.121	.125	.132	.128
Share	1.000	1.000	1.000	1.000	1.000	1.000
Energy	43,158.810	47,480.430	49,180.990	52,068.580	56,448.560	55,631.330
Share	.180	.177	.177	.184	.194	.208
Metals	34,680.720	35,392.620	35,716.490	35,177.410	37,991.730	34,186.650
Share	.145	.132	.128	.125	.130	.128
Machinery	103,174.800	114,687.100	123,547.600	128,292.900	125,656.100	106,947.900
Share	.431	.427	.444	.455	.432	.401
Chemicals	21,769.670	25,377.890	26,000.910	24,838.270	26,618.770	28,062.970
Share	.091	.094	.093	.088	.091	.105
Mineral products	5,362.582	5,734.117	5,414.984	4,913.699	5,449.121	3,123.370
Share	.022	.021	.019	.017	.019	.012
Wood and paper products	6,917.480	7,840.141	6,973.523	6,959.473	7,225.941	9,184.410
Share	.029	.029	.025	.025	.025	.034
Light industry	9,215.170	12,262.220	12,084.750	11,307.770	12,193.520	9,679.090
Share	.039	.046	.043	.040	.042	.036
Processed foods	7,853.445	8,389.656	9,327.390	8,982.750	10,550.430	13,327.600
Share	.033	.031	.033	.032	.036	.050
Other industry	2,485.642	2,748.750	3,077.586	3,085.596	2,852.618	1,648.724
Share	.010	.010	.011	.011	.010	.006
Agriculture products	4,257.734	8,500.477	6,743.988	6,238.371	5,688.629	4,805.699
Share	.018	.032	.024	.022	.020	.018
Forest products	290.984	284.714	260.651	196.485	299.584	181.510
Share	.001	.001	.001	.001	.001	.001
Other products and services	31.187	94.991	145.286	177.198	149.960	88.880
Share	0	0	.001	.001	.001	0

The import response of the Polish economy to changing demand has been calculated separately for hard currency and soft currency imports and converted into 1977 domestic zlotys. As Table 4 shows, Polish hard currency imports grew by an average 24.4 percent per year in the period 1971–76, peaking in 1972 at 48.2 percent. From 1977 through 1981, hard currency imports declined on average by 12.0 percent per year. The debt crisis imposed a 30.9-percent drop in 1981, which rolled hard currency imports back to 1972–73 levels. The commodity categories whose shares in hard currency imports declined the most included metals, machinery and construction, mineral products, wood and paper products, light industrial products, and miscellaneous industrial products. Import shares of agricultural products and processed foods increased relatively because of bad harvests and Warsaw's need to moliify consumers.

Soft currency imports (Table 5) followed a very different path. They increased irregularly over the period 1971–81, their growth rate averaging some 5 percent per year. The level of soft currency imports exceeded the level of hard currency imports only in 1970–72 and 1980–81. The commodity categories which gained significant shares in soft currency imports over the decade were machinery (including affiliated construction of plants and equipment installation) and chemicals; major losers were metals and agricultural products. This suggests a tendency to substitute CMEA machinery and construction for Western machinery and construction imports, and to substitute Western agricultural imports for CMEA agricultural imports.

V. RESOURCE REQUIREMENTS OF THE ECONOMY: CAPITAL, LABOR, AND ENERGY

Capital, labor, and energy requirements exhibited differing patterns over the decade (See Table 6).

The capital stock, unadjusted for changes in the utilization rate, grew at a fairly steady rate averaging 5.9 percent per year.

The average annual rate of growth of employment from 1971 through 1981 was only 0.8 percent, with declines coming in 1975 and 1978–80.

Apparent energy consumption grew at an average rate of 3.2 percent per year over the decade, with declines in 1974 and 1981.[5] (The GNP/energy ratio's apparently perverse behavior—it declined from 1.048 in 1974 to 0.888 in 1981—was at least partially due to the expansion of nonprimary electric power, which involves energy loss both in generation and transmission. The shares of oil and gas in energy consumption increased over the decade at the expense of coal. This may have been due to shifts in the composition of output, that is, faster growth of oil and gas using sectors.)

Since the capital stock was the fastest growing resource in the Polish economy, this implies a capital-intensive, unbalanced growth pattern. Energy requirements increased at somewhat more than half the rate of the capital stock and the growth rate for employment was slightly over a tenth of the rate for capital.

TABLE 6.—CAPITAL, LABOR, AND ENERGY REQUIREMENTS TO SUPPORT POLISH GNP

[Capital stock in billion zlotys of January 1, 1977. Labor in thousand workers. Energy in barrels per day oil-equivalent. GNP in million 1977 domestic zlotys]

	1970	1971	1972	1973	1974	1975
Capital stock	4,883.801	5,022.301	5,283.500	5,589.898	6,025.898	6,479.898
Percent change		2.836	5.201	5.799	7.800	7.534

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[5] Year to year changes are questionable, however, because apparent consumption is calculated as production plus net imports; inventory changes are thus included in apparent consumption.

TABLE 6.—CAPITAL, LABOR, AND ENERGY REQUIREMENTS TO SUPPORT POLISH GNP—Continued

[Capital stock in billion zlotys of January 1, 1977. Labor in thousand workers. Energy in barrels per day oil-equivalent. GNP in million 1977 domestic zlotys]

	1970	1971	1972	1973	1974	1975
GNP/capital ratio	317.740	323.169	329.573	334.443	328.627	328.049
Percent change		1.709	1.982	1.478	-1.739	-.176
Capital/GNP elasticity		.617	.714	.788	1.316	1.026
Labor	15,175.000	15,456.000	15,896.000	16,311.000	16,711.000	16,572.200
Percent change		1.852	2.847	2.611	2.452	-.831
GNP/labor ratio	102.259	105.011	109.543	114.616	118.501	128.271
Percent change		2.692	4.316	4.631	3.390	8.244
Labor/GNP elasticity		.403	.391	.355	.414	-.113
Energy	1,652,510.000	1,717,690.000	1,809,830.000	1,892,150.000	1,888,760.000	2,078,360.000
Percent change		3.944	5.364	4.548	-0.179	10.038
GNP/energy ratio	.939	.945	0.962	.988	1.048	1.023
Percent change		.624	1.823	2.691	6.115	-2.448
Energy/GNP elasticity		.859	.736	.618	-.030	1.367
Coal	1,366,070.000	1,401,880.000	1,464,320.000	1,496,700.000	1,500,060.000	1,619,910.000
Percent change		2.621	4.454	2.211	.224	7.990
Share	.827	.816	.809	.791	.794	.779
Oil	171,080.000	190,080.000	213,350.000	266,070.000	259,990.000	308,250.000
Percent change		11.106	12.242	24.711	-2.285	18.562
Share	.104	.111	.118	.141	.138	.148
Gas	103,980.000	115,000.000	122,300.000	128,820.000	130,350.000	140,120.000
Percent change		10.598	6.348	5.331	1.188	7.495
Share	.063	.067	.068	.068	.069	.067
Hydro/nuclear	11,380.000	10,730.000	9,860.000	560.000	-1,640.010	10,080.000
Percent change		-5.712	-8.108	-94.320	-392.859	-714.630
Share	.007	.006	.005	.000	.001	.005

	1976	1977	1978	1979	1980	1981
Capital stock	6,943.102	7,465.000	7,973.898	8,466.000	8,840.000	9,318.700
Percent change	7.148	7.517	6.817	6.171	4.418	3.379
GNP/capital ratio	313.818	297.289	288.179	266.657	248.882	227.722
Percent change	-4.338	-5.267	-3.064	-7.468	-6.666	-8.502
Capital/GNP elasticity	2.859	4.055	1.924	-3.511	-1.737	-.625
Labor	17,029.000	17,260.000	16,633.600	16,552.000	16,491.600	16,574.300
Percent change	2.756	1.357	-3.629	-0.491	-.365	.501
GNP/labor ratio	127.950	128.578	138.149	136.389	133.408	125.561
Percent change	-.250	.491	7.443	-1.273	-2.186	-5.882
Labor/GNP elasticity	1.103	.732	-1.024	.279	.144	-.093
Energy	2,182,150.000	2,319,430.000	2,371,000.000	2,466,000.000	2,533,000.000	2,343,000.000
Percent change	4.994	6.291	2.223	4.007	2.717	-7.501
GNP/energy ratio	.998	.957	.969	.915	.869	.888
Percent change	-2.375	-4.175	1.292	-5.542	-5.120	2.260
Energy/GNP elasticity	1.998	3.393	.627	-2.280	-1.069	1.386
Coal	1,696,800.000	1,781,160.000	1,814,000.000	1,881,000.000	1,935,000.000	1,797,000.000
Percent change	4.747	4.972	1.844	3.693	2.871	-7.132
Share	.778	.768	0.765	.763	.764	.767
Oil	321,950.000	359,090.000	370,000.000	388,000.000	391,000.000	340,000.000
Percent change	4.444	11.536	3.038	4.865	.773	-13.043
Share	.148	.155	.156	.157	.154	.145
Gas	152,600.000	166,100.000	177,000.000	186,000.000	191,000.000	188,000.000
Percent change	8.907	8.847	6.562	5.085	2.688	-1.571
Share	.070	.072	.075	.075	.075	.080
Hydro/nuclear	10,800.000	13,080.000	10,000.000	11,000.000	16,000.000	18,000.000
Percent change	7.143	21.111	-23.547	10.000	45.454	12.500
Share	.005	.006	.004	.004	.006	.008

VI. The Adjustments of the Polish Economy to Changing Demands and Scarcities

This section reports and discusses the annual changes from 1971 through 1981 in the Polish economy's resource requirements disaggregated according to: changes in the level of aggregate demand, changes in the composition of aggregate demand, and changes in the technology of production and use of goods and services. Conventional productivity measures and the measures of technological change developed in this paper are compared in Figures 1–5 (see below).

AN INPUT-OUTPUT BASED PRODUCTIVITY MEASURE

This section explains the approach used in this paper to measure technological change. A key objective is to avoid problems associated with some conventional measures of technological change.[6]

The input-output based calculations take into account both direct and indirect technological adjustments and sort out the effects of the growth and changing composition of aggregate demand. The mathematics of the analysis are presented in Appendix B and the results are in Tables 7 through 15. These tables disaggregate each year's change in capital, labor, energy, and import requirements into three components which, added together, will equal the net change in the requirement for that factor for that year:

> The effects of changes in the level of aggregate demand—total domestic end-uses plus total exports—on each year's requirements. Aggregate demand grew each year in the period 1971 to 1978 and declined each year from 1979 to 1981. Thus, for all resource requirements, the effect was positive from 1971 to 1978 and negative from 1979 to 1981.
>
> The effects of the changing composition of aggregate demand on each year's requirements, including the effects of tradeoffs between producing for domestic use versus for export, tradeoffs among domestic uses such as consumption versus investment versus defense, and tradeoffs among the 12 export product categories.

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[6] One measure of technological change affecting labor use is the rate of growth in labor productivity, (the percentage change in the GNP/labor ratio reported in Table 6, line 9). This ratio, however, is affected by things other than technological change, including the changing composition of aggregate demand. For example, if a small economy for which trade is important has been exporting raw materials (which require relatively little labor to produce) and begins to export products made from these raw materials (which require relatively more labor to produce), labor productivity will drop, other things held constant. Similarly, if the share of consumption relative to investment increases, labor productivity will register a decline since the lighter industries that support consumption are more labor intensive than the heavier industries which produce investment goods. These declines in productivity likely would be interpreted as signs that the economy is in trouble when in reality it is only maturing by increasing the share of value-added in exports and producing more consumer goods and services relative to investment goods.

Erroneous conclusions also can result from focusing only on direct factor input into important industries or uses. For example, overall energy conservation in many countries has been much greater than was predicted in the mid-1970s on the basis of studies of energy productivity in important energy-using sectors such as steel and transport. Overall energy usage can be reduced not only directly—for example, using less energy to make steel—but also indirectly, using less steel to make machinery. Unpublished calculations by the author suggest that for Western industrial countries in the years immediately following rapid energy price increases, indirect energy savings accounted for a fourth to a third of economy-wide energy savings.

The effects on each year's requirements of "technological change," defined here to include:

(a) changes in the direct input of capital, labor, energy, and imports per unit value-added in each domestic producing sector (example: coal input per zloty value-added in steel production);

(b) changes in the intermediate inputs from other sectors per unit value-added in each domestic producing sector (example: a change in coal requirements because—although the same amount of coal is needed to make steel—less steel is used in each machine);

(c) changes in the product mix within each domestic end-use and each export category (example: more domestic machinery and less imported machinery per zloty expenditure on investment).

Although the measures of technological change reported here are an improvement over conventional measures, they are still contaminated by four extraneous effects: weather, uncounted inventory changes, leakages in and out of the officially recorded economy, and errors. Weather profoundly affects agricultural productivity. Hidden reserves permeate the system and may tend to smooth out recorded changes in resource requirements. Resources also move in and out of the officially recorded economy and these movements are unlikely to cancel in any given year. For example, if fuel previously used in the open economy is channeled into the second or hidden economy but still recorded as used in the open economy, energy productivity will fall. Furthermore, resource shifts between the official and secondary economies are very likely related to the degree of central control and its competence.

READING TABLES 7-15

Each line in Tables 7 through 15 disaggregates the annual change in Poland's requirement for some input according to three economic factors. For example, in 1970 Poland's capital stock was 4883.801 billion zlotys of 1 January, 1977; in 1971, this capital stock increased to 5022.301 billion zlotys (see Table 6). The first line of Table 7 disaggregates this change:

Capital Stock, end of 1970	4,883.801
Additional capital required in 1971 because of growth in aggregate demand	+293.023
Reduction in capital required in 1971 because of change in composition of aggregate demand	−86.168
Reduction in capital required in 1971 because of capital-saving technological change	−68.355
Capital Stock, end of 1971	5,022.301

This calculation shows that, although technological change helped to reduce Poland's capital stock requirements in 1971 by 68.355 billion zlotys, most of the savings (86.168 billion zlotys) was due simply to faster growth of demands for less capital-intensive goods and services.

TABLE 7.—ANNUAL ADDITIONS TO POLAND'S REQUIREMENTS FOR CAPITAL STOCK DUE TO THREE ECONOMIC FACTORS

[Billion zlotys of Jan. 1, 1977]

	Effect of growth of aggregate demand	Effect of changing composition of aggregate demand	Effect of technological change
1971	293.023	−86.168	−68.355
1972	497.719	52.633	−289.152
1973	570.906	−52.152	−212.355
1974	456.539	−25.449	4.910
1975	470.434	74.563	−90.996
1976	278.441	−0.094	184.855
1977	87.430	112.402	322.066
1978	218.586	33.320	256.992
1979	−144.398	118.383	518.117
1980	−184.008	−99.004	657.012
1981	−600.465	−214.770	1,113.934

TABLE 8.—ANNUAL ADDITIONS TO POLAND'S REQUIREMENTS FOR LABOR DUE TO THREE ECONOMIC FACTORS

[Thousands of workers]

	Effect of growth of aggregate demand	Effect of changing composition of aggregate demand	Effect of technological change
1971	677.500	−140.441	−256.059
1972	1,150.793	−4.000	−706.793
1973	1,320.008	−151.988	−753.020
1974	1,055.574	−50.871	−604.703
1975	1,087.699	87.668	−1,314.168
1976	643.785	−139.551	−47.434
1977	202.152	325.438	−296.590
1978	505.395	−2.094	−1,129.699
1979	−333.867	237.836	14.430
1980	−425.445	−129.043	494.090
1981	−1,388.355	−194.918	1,665.973

TABLE 9.—ANNUAL ADDITIONS TO POLAND'S REQUIREMENTS FOR ENERGY DUE TO THREE ECONOMIC FACTORS

[Barrels per day oil equivalent]

	Effect of growth of aggregate demand	Effect of changing composition of aggregate demand	Effect of technological change
1971	91,043.400	1,186.781	−27,050.200
1972	154,645.600	827.363	−63,332.960
1973	177,334.800	−2,401.844	−92,662.900
1974	141,850.100	−3,229.430	−142,010.600
1975	146,166.900	−2,003.629	45,436.670
1976	86,513.130	8,047.141	9,229.730
1977	27,165.320	−108.191	110,222.800
1978	67,916.190	4,779.656	−21,125.840
1979	−44,865.890	−31.793	139,897.600
1980	−57,172.040	2,222.098	121,949.900
1981	−186,569.100	−6,961.906	3,531.031

TABLE 10.—ANNUAL ADDITIONS TO POLAND'S REQUIREMENTS FOR COAL DUE TO THREE ECONOMIC FACTORS

[Barrels per day oil equivalent]

	Effect of growth of aggregate demand	Effect of changing composition of aggregate demand	Effect of technological change
1971	69,915.000	4,559.000	−38,664.000
1972	118,757.000	−1,585.000	−54,732.000
1973	136,219.000	−999.000	−102,840.000
1974	108,931.000	−3,175.000	−102,396.000
1975	112,246.000	−6,841.000	14,445.000
1976	66,436.000	6,960.000	3,494.000
1977	20,861.000	−7,743.000	71,242.000
1978	52,155.000	4,633.000	−23,948.000
1979	−34,454.000	−3,875.000	105,329.000
1980	−43,904.000	8,821.000	89,083.000
1981	−143,272.000	5,425.000	−153.000

TABLE 11.—ANNUAL ADDITIONS TO POLAND'S REQUIREMENTS FOR OIL DUE TO THREE ECONOMIC FACTORS

[Barrels per day]

	Effect of growth of aggregate demand	Effect of changing composition of aggregate demand	Effect of technological change
1971	14,095.190	−2,229.563	7,134.375
1972	23,941.940	1,673.375	−2,345.313
1973	27,462.500	−861.250	26,118.750
1974	21,960.940	10.313	−28,051.250
1975	22,629.310	3,242.313	22,388.380
1976	13,393.810	744.000	−437.813
1977	4,205.750	5,026.625	27,907.630
1978	10,514.560	106.875	288.563
1979	−6,945.938	2,495.438	22,450.500
1980	−8,851.375	−4,463.875	16,315.250
1981	−28,884.310	−8,355.000	−13,760.690

TABLE 12.—ANNUAL ADDITIONS TO POLAND'S REQUIREMENTS FOR GAS DUE TO THREE ECONOMIC FACTORS

[Barrels per day oil equivalent]

	Effect of growth of aggregate demand	Effect of changing composition of aggregate demand	Effect of technological change
1971	6,519.813	−1,031.250	5,531.438
1972	11,074.560	774.000	−4,548.563
1973	12,703.000	−398.375	−5,784.625
1974	10,158.190	4.813	−8,633.000
1975	10,467.380	1,499.750	−2,197.125
1976	6,195.438	344.125	5,940.438
1977	1,945.375	2,325.125	9,229.500
1978	4,863.625	49.063	5,987.313
1979	−3,212.938	1,154.438	11,058.500
1980	−4,094.250	−2,064.625	11,158.880
1981	−13,360.690	−3,864.688	14,225.380

TABLE 13.—ANNUAL ADDITIONS TO POLAND'S REQUIREMENTS FOR PRIMARY POWER DUE TO THREE ECONOMIC FACTORS

[Barrels per day oil equivalent]

	Effect of growth of aggregate demand	Effect of changing composition of aggregate demand	Effect of technological change
1971	513.422	−111.406	−1,052.016
1972	872.094	−35.012	−1,707.082
1973	1,000.332	−143.219	−10,157.110
1974	799.938	−69.555	−2,930.391
1975	824.281	95.309	10,800.420
1976	487.875	−0.984	233.109
1977	153.195	283.059	1,843.746
1978	383.000	−9.281	−3,453.719
1979	−253.012	193.332	1,059.680
1980	−322.414	−70.402	5,392.816
1981	−1,052.125	−167.219	3,219.344

TABLE 14.—ANNUAL ADDITIONS TO POLAND'S REQUIREMENTS FOR HARD CURRENCY IMPORTS DUE TO THREE ECONOMIC FACTORS

[Million 1977 domestic zlotys]

	Effect of growth of aggregate demand	Effect of changing composition of aggregate demand	Effect of technological change
1971	12,126.810	2,482.313	5,589.438
1972	20,598.440	4,031.625	30,166.060
1973	23,627.310	6,581.688	37,566.750
1974	18,894.060	4,964.375	16,304.190
1975	19,469.130	725.688	13,350.880
1976	11,523.380	−2,293.938	26,953.130
1977	3,618.438	−4,269.000	−36,575.560
1978	9,046.190	1,854.625	−17,328.940
1979	−5,975.938	−5,840.813	−5,665.250
1980	−7,615.250	−3,300.625	−9,511.940
1981	−24,850.630	−4,048.750	−52,798.500

TABLE 15.—ANNUAL ADDITIONS TO POLAND'S REQUIREMENTS FOR SOFT CURRENCY IMPORTS DUE TO THREE ECONOMIC FACTORS

[Million 1977 domestic zlotys]

	Effect of growth of aggregate demand	Effect of changing composition of aggregate demand	Effect of technological change
1971	10,550.810	−1,025.125	8,786.125
1972	17,921.440	3,971.000	−8,450.188
1973	20,556.750	3,043.313	−5,668.000
1974	16,438.630	4,324.000	−643.500
1975	16,938.940	4,433.063	−24,104.750
1976	10,025.810	−4,640.938	9,614.880
1977	3,148.188	5,685.563	20,761.130
1978	7,870.563	−2,048.688	3,859.188
1979	−5,199.313	−2,336.188	11,299.940
1980	−6,625.625	−8,987.063	24,499.060
1981	−21,621.060	−10,044.630	7,408.875

Measures of Productivity Change

By definition, for any input

$$\text{Conventional Productivity Change} = \left[\frac{\frac{\text{GNP}(t)}{\text{Input}(t)}}{\frac{\text{GNP } (t-1)}{\text{Input } (t-1)}} - 1 \right] *100.$$

For the data as calculated in Tables 7 through 15, this is equivalent to

$$\text{Conventional Productivity Change} = \left[\frac{\frac{\text{GNP } (t)}{\text{Input } (t-1)+G(t)+C(t)+TC(t)}}{\frac{\text{GNP } (t-1)}{\text{Input } (t-1)}} - 1 \right] *100.$$

where

G(t) = Effect of Growth of Aggregate Demand
C(t) = Effect of Changing Composition of Aggregate Demand
TC(t) = Effect of Technological Change.

Then,

$$\text{Technological Change Only} = \left[\frac{\frac{\text{GNP}(t)}{\text{Input } (t-1)+TC(t)}}{\frac{\text{GNP } (t-1)}{\text{Input } (t-1)}} - 1 \right] *100.$$

MEASURES OF PRODUCTIVITY CHANGE
(percent)

FIGURE 1:

CAPITAL STOCK

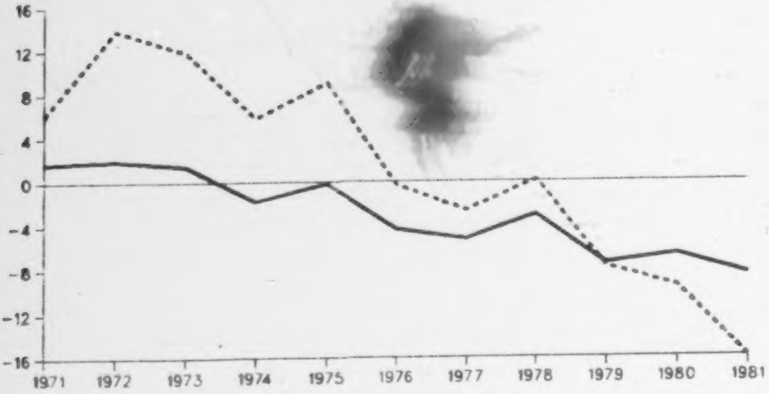
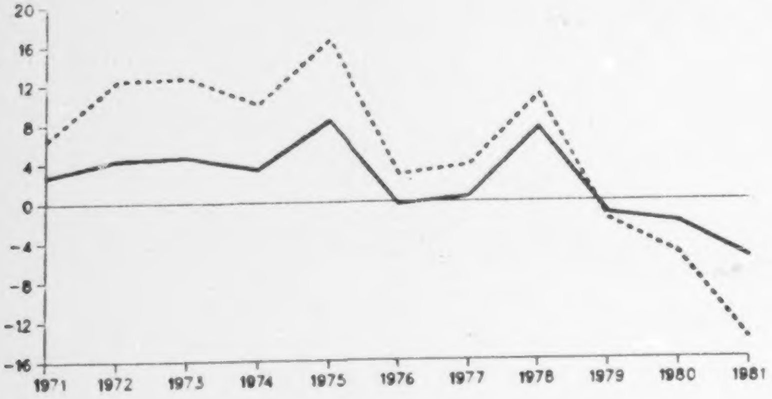


FIGURE 2:

LABOR

Legend
CONVENTIONAL PRODUCTIVITY CHANGE ▬
TECHNOLOGICAL CHANGE ONLY ┅

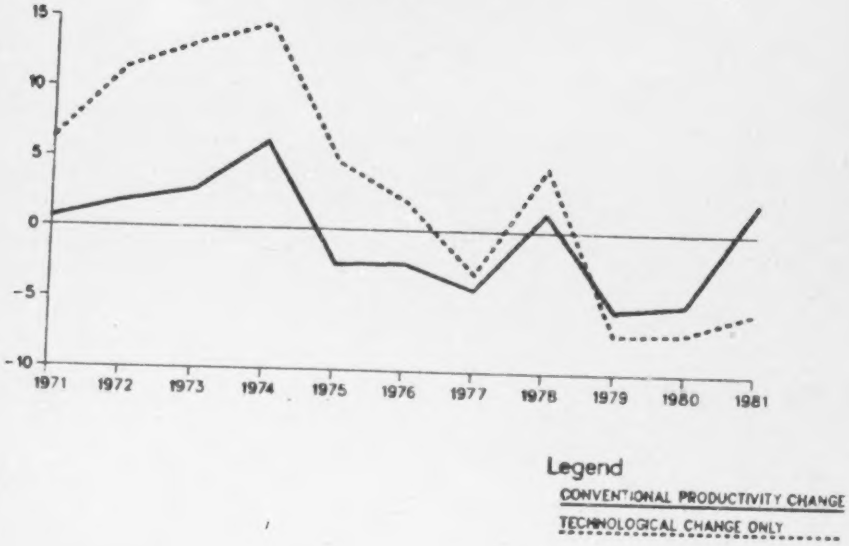


MEASURES OF PRODUCTIVITY CHANGE

(percent)

FIGURE 3:

ENERGY



MEASURES OF PRODUCTIVITY CHANGE
(percent)

FIGURE 4:

HARD CURRENCY IMPORTS

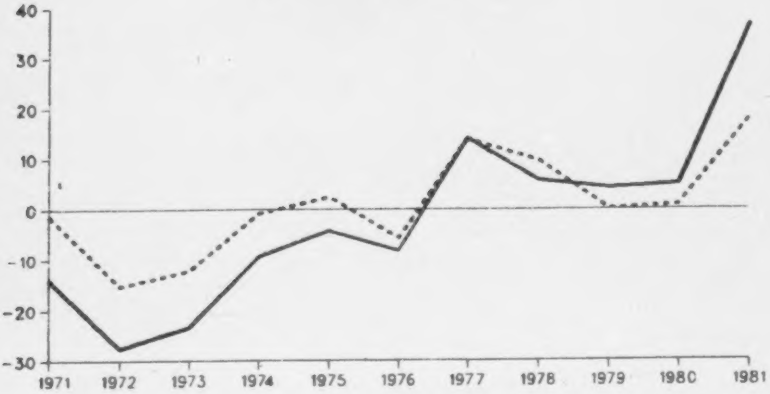


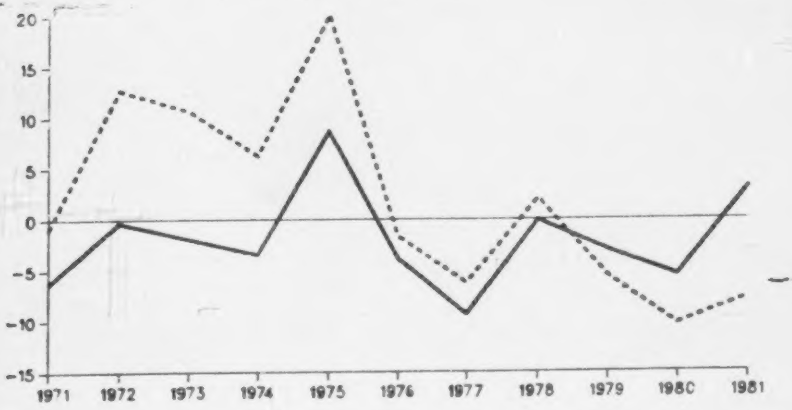
FIGURE 5:

Legend

CONVENTIONAL PRODUCTIVITY CHANGE

TECHNOLOGICAL CHANGE ONLY

SOFT CURRENCY IMPORTS



A. Capital Stock

The 1970's may be broken into two periods on the basis of the Polish economy's ability to use its capital stock effectively. Up to 1975, the economy improved its ability to use its capital; after 1976, efficiency deteriorated at an accelerating pace, especially after 1979 when declining GNP idled more and more of the capital stock.[7]

The Polish economy was able to use capital effectively at the start of the 1970s, especially technologically advanced capital. Thus, both the conventional capital productivity measures (Table 6, Percent Change in GNP/Capital Ratio) and the disaggregated measures (Table 7, last column) show use of capital efficient in the early 1970s. Capital productivity grew between 1.5 percent and 2.0 percent per year from 1971 to 1973 and the capital/GNP elasticity was below unity. The disaggregation of changing capital demands in Table 7 shows that while growing demand increased capital requirements, the Polish economy was adjusting technologically to reduce capital needs through 1975. The exception was 1974, a year of bad weather for agriculture.

While conventional capital productivity declined in 1975, our disaggregation in Table 7 indicates that technological adjustments within the Polish economy were still capital-saving but were overwhelmed by capital-using growth and compositional changes in aggregate demand (see figure 1). Beginning in 1976, the Polish economy became a profligate waster of capital stock, and its ability to use effectively its burgeoning capital stock deteriorated through 1981. Furthermore, the deterioration in the efficient use of capital is even worse than is indicated by conventional capital productivity measures. Part of the deterioration in efficiency was masked in 1979 by the general decline in effective aggregate demand and the changing composition of aggregate demand that tended to be capital-saving. The changing composition of aggregate demand was capital-saving because capital intensive end-uses and export categories declined the most. Masking was most severe in 1981 when the conventional capital productivity measure declined 8.5 percent, while the more purely measured deterioration in the efficiency in capital use from Table 7 was 12.2 percent of the 1981 capital stock (Table 7). Furthermore, 1976, 1978, and 1981 were relatively good agricultural years—an extraneous factor which should register as capital-saving in our measure of technological change since it augments agricultural output without any need to increase the capital stock.

B. Labor

Between 1971 and 1975, conventionally calculated Polish labor productivity (GNP per employed person) increased on average by 4.6 percent per year, peaking at 8.2 percent in 1975 (See Table 6). After small fluctuations in 1976 and 1977, the growth rate of productivity jumped to 7.4 percent in 1978, at least partly due to the good harvest (see figure 2). The reverse happened in 1979–81 when productivity declined annually by 1.3, 2.2, and 5.9 percent, respectively.[8]

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[7] The connection between growing inefficiency in capital use and hard currency imports is less than perfect. Efficiency in capital use turned down in 1976 and hard currency imports did not decline until 1977.

The disaggregation of changes in Polish labor requirements in Table 8 reveals a somewhat different chronology. While overall demand growth added to labor needs up to 1978, changes in the composition of that demand were mildly labor-saving only through 1974 after which their impact was erratic. Technological changes, however, were consistently labor-saving through 1978. Beginning in 1979, the technological adjustments became net labor-using as GNP dropped faster than employees were laid off. Furthermore, the deterioration in the efficiency of labor use has compensated partly by the labor-saving decline in effective aggregate demand and labor-saving changes in its composition. Removing these two factors, the deterioration in efficiency in labor use in 1981 was equivalent to 10.1 percent (1665.073/16574.3) of 1981 employment. Thus, for labor as for capital, deteriorating efficiency in their use in 1980 and 1981 was partly compensated for by adjustments in the level and structure of effective aggregate demand. Finally, the deterioration was significantly worse than indicated by conventional productivity measures.

C. Energy

Conventionally calculated energy productivity (the GNP/energy ratio, see Table 6) has acted perversely in the Polish case (see figure 3). It improved at an accelerating pace from 1971 through 1974 and abruptly deteriorated thereafter, with improvements in the ratio only in 1978 and 1981. Both of those years had exceptionally good harvests, and no other reasons for improved energy productivity in those years have been found. By conventional measures, Poland's overall energy efficiency went into decline just as the rest of the world was responding to OPEC price increases with substantial improvements in efficiency of energy use.

Table 9, which disaggregates the effects of three major economic factors affecting energy requirements, shows that our measure of technological change tells substantially the same story. In general, the effects of the changing composition of effective demand on overall energy requirements are so small as to be dwarfed by the effects of technological change within the economy. The major exception occurred in 1981 when net energy-using technological changes within the economy were more than compensated for by net energy-saving changes in the composition of effective demand.

Technological changes within the Polish economy have affected total energy consumption, coal consumption, and primary electric power consumption (Tables 9 through 13) in the same directions if not always to the same degree. Oil and gas consumption, on the other hand, are exceptions. Oil consumption declined by 13.0 percent in 1981—the first time since 1974. Of that decline, we calculate that 7.4 percentage points were due to the overall decline in aggregate demand; 2.1 percentage points were due to changes in composition of effective aggregate demand as energy exports and investment declined; and 3.5 percentage points to technological adjustments within the economy. The year 1981 was the first in which technological change was net oil-saving (13,761 barrels/day) since 1976 (only 438 barrels/day) and 1974 (a substantial 28,051 barrels/day).

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[8] The connection between the reversal in labor productivity growth and hard currency imports is less than perfect. Labor productivity began to decline in 1979, two years after hard currency imports began their decline.

The first year in which all three major economic factors tended to reduce oil consumption was 1981. But this development may not be an accurate guide to the future for at least two reasons: first, part of this good performance may have been due to the burning of secondary uncounted [9] oil inventories; second, the sharp slowdown in economic activity that year meant that in many instances peak-load capacity for electricity, heat, and steam generation was not used or that use was much less than normal. Oil is usually the fuel of choice for peak-load firing because it is the highest cost, most easily stored, and simplest startup and shutdown fuel. Hence, a sudden but widespread economic slowdown will reduce oil consumption first and most among all fuels. In any future recovery, both these factors are likely to be reversed: secondary uncounted oil inventories would be replenished and more peak-load capacity would be used.

Polish consumption of gas (table 6) increased at an annual average rate of 5.5 percent between 1971 and 1981, with 1981 the only year showing a decline. Furthermore, the share of natural gas in total energy consumed increased from 6.3 percent in 1970 to 8.0 percent in 1981. Between 1972 and 1975, technological changes tended to reduce gas consumption, but were swamped by the impact of booming economic growth. In 1976, technological adjustments became net gas-using and contributed 3.9 percent (5940.438/152600) to total gas consumption that year and accounted for 47.6 percent of the increase in gas consumption. By 1981, technological changes within the economy boosted gas consumption by 7.4 percent (14225.380/191000) although this was not sufficient to balance the combined negative impacts of economic decline and gas-saving changes in the composition of aggregate demand. Table 12 clearly shows a strong technological shift toward using more gas through 1981 despite the slowdown in growth of gas consumption in the period 1977–1980 and the actual decline registered in 1981.

Over the period 1971–1981, total electric power generation grew at an annual average rate of 5.4 percent—exactly twice the averge rate of GNP growth. The massive electrification of the Polish economy is a major contributor to the generally energy-using bias of technological change over the period. Significant energy losses occur in both electricity generation and transmission; thus, electrification is markedly energy-using both because its cleanliness and convenience at point of use increase the application of energy to economic tasks and because it takes more energy to accomplish tasks via electricity than by burning fuel at the task site.

The figures on apparent consumption of primary electricity in Tables 6 and 13 are difficult to interpert because they are designed to complete Polish energy balances[10]—not to tell us about overall electricity use. Electricity is of two types. Primary electricity is electricity not generated by burning another domestic energy source, such as coal, which is already included in the energy balance. Since Poland has no nuclear plants, apparent consumption of primary elertricity consists solely of hydroelectric generation plus net power imports.[11] Secondary electricity is produced by burning domestic coal, oil, or gas and is not included in the energy balances because including it would involve energy double-counting. To avoid double-counting, only primary electricity—that not derived from a fuel already included in the energy balance—is included in Tables 6 and 13.

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[9] Even in countries without many private vehicles, the potential for storage of liquid fuels by individuals and enterprises is significant. These secondary inventories may not be reported and therefore not counted in official statistics.

Table 13, however, does tell a good deal about the effects of economic factors on overall electricity requirements in Poland. Electricity users and the input-output table cannot tell how power was generated or where it came from. Thus, although the figures in Table 13 are much too small, their signs and proportions to each other reflect the relative influence of these economic factors on electricity consumption in general. While the changing composition of aggregate demand has no apparent pattern, the effect of technological adjustment was overwhelmingly electricity-saving from 1971 to 1974 and electricity-using thereafter, with 1978 as the only exception. This time pattern precisely matches that for total energy-use and is consistent with the hypothesis that electrification is an important energy-using technological change. This at least partly explains why Poland became net energy-using after 1974 despite the general drive to conserve energy.

D. Imports

Imports have become very important to the Polish economy (Tables 4 and 5). The total import/GNP ratio increased from 16.2 percent in 1970 to a high of 26.9 percent in 1976. It stayed over 25 percent until 1981 when the hard currency crunch forced a drop to 21.6 percent. Polish imports have been dominated by machinery and affiliated construction whose share in total imports ranged from 30 percent in 1971 to 41 percent in 1974. Even with the economic crisis, machinery accounted for 32 percent of total imports in 1981. Processed foods and agricultural products combined to account for 24 percent of hard currency imports and were followed by energy (13 percent), chemicals (12 percent), and metals (10 percent).

Changes in the hard currency import/GNP ratio reflect the boom in trade with the West in the first half of the 1970s and the adjustment measures later in the decade. The ratio ranged from 6.0 percent in 1970 to 15.9 percent in 1976, and fell back to 8.8 percent in 1981. The soft currency import/GNP ratio had a low of 10.1 percent in 1970, a high of 13.2 percent in 1980 and was 12.8 percent in 1981. The ups and downs in the hard currency import/GNP ratio reflect changes in Poland's ability to finance those imports. In 1981, major hard currency imports were processed foods (25.1 percent), agricultural products (23.6 percent), machinery (20.9 percent), and chemicals (14.1 percent). Major soft currency imports were machinery (40.1 percent), energy (20.8 percent), metals (12.8 percent), and chemicals (10.5 percent). The important position of machinery in both hard and soft currency imports suggests that import requirements will be very sensitive to investment drives.

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[10] Energy balances are numerical records of energy production and use in an economy. Supply (production and imports) must equal or balance demand (consumption plus exports). Balances usually are annual and cover four major energy sources in equivalent energy units: coal, oil, gas, and primary electricity.

[11] This is the explanation of the anomaly in 1974, negative primary electricity consumption. In that year, net power exports exceeded hydroelectric output, so primary electricity registered a negative contribution to overall net domestic energy consumption.

Tables 14 and 15 disaggregate each year's change in imports according to the three causal economic factors outlined above. The impact of aggregate effective demand on both hard currency and soft currency imports is positive from 1971 through 1978 and negative from 1979 through 1981. The effect of the changing composition of aggregate demand is similar for the two categories of imports. The changing composition of demand is import-using in the first half of the decade—the only exception is 1971 when the changing composition of demand reduced soft currency imports. In the second half of the decade, the changing composition effect turns decidedly import-saving with two exceptions—soft currency imports in 1977 and hard currency imports in 1978. While many changes in the composition of aggregate demand occurred over this period, a glance at Table 1 suggests that the changing share of investment in domestic demand is a key explanatory factor. The share of investment in domestic demand rose through 1975, dropped in 1976, rose very slightly for two years, then resumed its descent in 1979. Investment consists largely of machinery and construction, and the share of machinery (including affiliated construction) in imports ranged from 21 percent to 42 percent in hard currency imports (Table 4) and from 32 percent to 46 percent in soft currency imports (Table 5). Thus, the larger the share of investment in aggregate demand, the greater the economy's need for imports.

The last columns of Tables 14 and 15 chronicle the effects of Poland's technological adjustments on the economy's need for imports. Technological change was consistently and significantly hard currency-import-using from 1971 to 1976; it became significantly and consistently hard currency-import-saving from 1977 to 1981. The opposite is true for soft currency imports: technological change was soft-currency-import-using in 1971, soft currency-import-reducing from 1972 to 1975, and soft currency-import-using from 1976 to 1981. These data may not indicate simple substitution of soft currency for hard currency imports. Tables 7, 8, 9, 14, and 15, when analyzed together, may show a complex interaction and intersubstitution between domestic resources, hard currency imports, and soft currency imports.

VII. CONCLUSIONS

At least three important inferences may be drawn concerning Poland's future ability to respond to changing economic scarcities, particularly to shortages in hard currency imports.

First, the Polish economy, can make significant structural adjustments and undergo technological change in response to resource scarcities. Shortages have not simply forced declines in GNP. While lacking the discipline of the market and the ability to transmit information about relative scarcities through flexible prices, central planners and managers do make adjustments, motivated in part by recognition that lack of appropriate steps to cope with scarce resources could prevent fulfillment of their individual output targets and affect their bonuses.

Second, the Polish economy has no simple permanent economic constraint. The last columns in Table 7 through 15 that chronicle the resource-using and resource-saving technological changes within the Polish economy are all mixes of pluses and minuses—even for oil and hard currency imports. It is the rapid change of scarcities that presents the major challenge to the Polish centrally-managed economy, especially because foreign trade represents a significant share of overall economic activity.

Third, technological change, when measured separately from growth and composition effects is revealed to be highly variable in both direction and magnitude. Unexpected reversals and changes in size do occur. Hence, while a great deal can be said about trends over five years, predictions for any one year are much less trustworthy. This problem may prove amenable to analysis, however, as further use is made of the kind of detailed consistent data provided here. Detail by sector and commodity group, for example, allows investigations of tradeoffs between domestic machinery and imported machinery. Much of the year-to-year technological change affecting hard currency import needs is likely related to the commodity composition of those imports, so greater detail in analysis should significantly improve the quality and reliability of shortrun projections.

Further analytical efforts should proceed a long three lines: review and updating of the Polish GNP and foreign trade accounts provided here for the first time; use of these newly available data to construct a model to forecast requirements for domestic resources and imports given domestic end-uses and exports; and development of similar data and extension of the analysis of productivity change to other countries to facilitate comparisons.

Appendix A: The GNP and Foreign Trade Accounts

The construction of Polish GNP accounts is based on three sources: official Polish data, in particular the detailed annual national income accounts and the two versions of the 1977 input-output table provided in the 1980 and 1981 editions of Rocznik Statystyczny; sectoral indexes and weights generated by L.W. International Financial Research and published in their occasional papers OP-63, OP-64, OP-70, OP-71, OP-72, and OP-73; and foreign trade and end-use disaggregation work by Jan Vanous and Charles Movit at Wharton Centrally Planned Economies Projects published in their documentation of POLMOD1. The approach in this paper has been to follow indexes and weights developed by L.W. International Financial Research, imposing minimal changes to disaggregate the fuels and agriculture sectors and the residual end-use category and to impose the constraint of a GNP accounting framework.

L.W. International Financial Research provides detailed sectoral indexes and 1977 sectoral weights in OP-64, Table 5 and OP-70, Tables 5 and 11. These indexes and weights were used with two exceptions; the fuels sector was replaced by separate oil and gas sectors with the weights proportional to 1977 oil and gas production in standard fuel units and the indexes for each fuel proportional to production of that fuel over time. Agriculture was disaggregated into three sectors; crops, animal products, and services. The weights were derived from the value-added for these three sectors given in the input-output table, with their sum constrained to equal the weight for aggregate agriculture in OP-70, Table 5. The indexes were derived from agricultural output data in million 1977 zlotys in OP-71, Table 5.1. Values of crops and animal products are given separately there; the index for agricultural services was assumed proportional to their total.

The weights and indexes were then combined to obtain GNP by sector-of-origin and in total for the years 1975 to 1980. The sector-of-origin components of GNP were calculated for the years 1970 to 1974 based on branch of industry data provided by L.W. International Financial Research, sector indexes in Table 5 of their OP-59, and agricultural output indexes in Gregor Lazarcik, "Comparative Growth, Structure, and Levels of Agricultural Output, Inputs, and Productivity in Eastern Europe, 1965-79," Table 2, in East European Economic Assessment, Volume 2, J.E.C., U.S. Congress, February 27, 1981, p. 594.

Total GNP indexes were provided in OP-70, Table 5 for 1975-81. These were combined with the 1977 GNP zloty total in OP-64, Table 5 to get total GNP for 1975-81 in 1977 zlotys. These total GNP figures differed slightly (never more than a few percent) from the sums of the sectors. The sector value-added were then adjusted proportionally so that they equalled total GNP in each year.

L.W. International Financial Research provides indexes and weights for the end-use components of GNP in OP-72, Tables 5 and 11 for the years 1975-80. End-use components of GNP were calculated for the years 1970-74 based on indexes given in Table 5 of OP-61, Eastern Europe: Domestic Final Uses of Gross Product Selected Years, 1965-1979, published by L.W. International Financial Research in 1980. The methodology (described below) used to disaggregate the residual component into investment, defense, and additions to inventories is the same for the periods 1975 to 1981 and 1970 to 1974. One additional assumption had to be made for 1970 to 1974. Since OP-61 does not disaggregate nonhousing personal consumption into food and other, the same index was used for both those components of domestic end-use GNP for this period.

Two major modifications were made in both periods. First, nonhousing personal consumption was further disaggregated into food consumption and other consumption with the relevant weights in 1975 zlotys given in Table 11 recalculated into 1977 zloty weights. Second, the residual end-use was disaggregated into fixed capital formation, defense, and additions to inventories. This disaggregation was based on time series for these three end-use components developed at Wharton for POLMOD1 based on official Polish time series for investment and additions to inventories and Polish input-output tables in 1977. The series themselves are given in Volume III of the POLMOD1 report along with brief descriptions of their development. The defense time series indexes are based on data in Military Expenditures in Eastern Europe, Post World War II to

1979, by Thad P. Alton, Elizabeth M. Bass, Gregor Lazarcik, and Wassyl Znayenko published by L. W. International Financial Research, OP–63, 1980, Table 4. The indexes were deflated by a weighted sum of various sectoral deflators with the weights based on the derived composition of the defense column of the 1977 input-output table. The derivation of that column is detailed in Volume 1 of the POLMOD1 reports, appendices A and B. In summary, in that source the residual expenditures column, less derived investment and inventory change columns was disaggregated into civilian and military government expenditures, using the corresponding columns in the 1972 U.S. input-output table as a template with adjustment made for the fact that a larger share of the Polish population is in the military. "Thus, the defense column in the input-output table and the defense expenditures time series used in this project are not to be considered as actual Polish defense expenditures. They are merely plausible approximations that are consistent with other Polish data and that provide a means of gauging the impact of changing defense burdens on Polish GNP and resource requirements. Extracting the defense series or the defense column from the input-output table and using them to support more detailed micro analysis of defense capabilities should not be considered."

Three derived Wharton time series—expenditures on investment, on additions to inventories, and on defense—were adjusted proportionally so that in each year their sum equals total "residual" expenditures as derived from the residual sector time series indexes and 1977 weights published by L. W. International Financial Research.

All these end-use indexes and 1977 end-use weights were combined to obtain end-use GNP components in 1977 domestic zlotys. These components were then adjusted proportionally so that in each year the end-use components equalled the GNP produced in the domestic sectors plus net imports, thus imposing the consistency constraint of GNP accounting.

The foreign trade components of the GNP accounts used here are taken from work done by Jan Vanous and Charles Movit for POLMOD1. Their efforts involved laboriously deflating commodity categories in devisa (foreign trade) zlotys and converting them into domestic zlotys. Linkages with ruble soft currency and dollar hard currency trade statistics were also developed. The results of their efforts in 1977 domestic zlotys are adopted here without change to complete the GNP accounts.

Total capital stock and employment time series were derived from various issues of Rocznik Statystyczny. Energy consumption data are based on Energy Supplies in Eastern Europe: A Statistical Compilation, ER79–10624, National Foreign Assessment Center, CIA, December 1979 and updates appearing in the annual Handbook of Economic Statistics published by CIA.

APPENDIX B: INPUT-OUTPUT ANALYSIS AND THE MEASUREMENT OF TECHNOLOGICAL CHANGE

The methodology used in this paper disaggregates year to year changes in the Polish economy's requirements for capital, labor, energy, (coal, oil, natural gas, and hydroelectric power), and imports (hard currency and soft currency) according to three causal factors: growth in effective aggregate demand, changes in the composition of that demand, and the net effects of technological changes within the Polish economy. The heart of the analysis is a modified 1977 Polish input-output table. Two versions of the original table appear in the 1980 and 1981 issues of Rocznik Statystyczny. Further information was taken from a recent article by Bronislaw Wojciechowski, "Import Intensiveness of the Polish Economy: General and (Industrial) Subsector Problems," Handel Zagraniczny, No. 4, 1982, pp. 3–8. The two versions of the original Polish table have been combined to obtain a 39-sector table published in Research Program on East European Defense Economies: First Phase—Construction of a Polish Econometric Model. Part III: Polish Economic Databank, Centrally Planned Economies Projects, Wharton Econometric Forecasting Associates, May 1982. This report documents Wharton's restructuring of this table. The Wharton restructured table is the starting point of the restructuring efforts underlying the table used in this paper. The essential features of this table are as follows:

The interindustry transactions matrix has 58 rows and columns: 34 domestic sectors, 12 hard currency import quasi-sectors, and 12 soft currency import quasi-sectors. Columns for import sectors have non-zero entries for use of domestic transportation services and domestic trade and distribution services.

The final demand quadrant has 19 columns: 7 domestic end-uses and 12 export categories.

A third quadrant consisting of only 2 rows provides sector data on capital stock and employment.

This input-output table combined with time series for GNP and foreign trade accounts and requirements for capital, labor, and energy are the data upon which the calculations for Tables 7 through 15 are based.

The fundamental equation underlying these calculations is developed as follows:

(1) Let eus_m be the share of end-use/export component m (one of 7 domestic end-uses or 12 commodity exports) in total GNP and let $xseu_{km}$ be the share of product or service k (one of 34 domestic products or 24 import categories) in end-use/export m. Then, the time vector of deliveries from producing/importing sector k to all 19 end-uses/exports of total aggregate demand (TAD) is

$$\sum_{m=1}^{19} xseu_{km}(t) * eus_{m}(t) * TAD(t).$$

(2) Multiply this expression by c_{jk} (t)—the direct plus indirect input per unit of output coefficients from the Leontief matrix of the input-output table. Sum across all producing/importing sectors to yield the gross output/import from each producing/import sector j needed to give the desired final demand:

gross output/$import_j$ (t)=

$$\sum_{k=1}^{58} c_{jk}(t) * \sum_{m=1}^{19} xseu_{km}(t) * eus_m(t) * TAD(t).$$

(3) a. To obtain the value-added in domestic producing sector j, multiply by the value-added/gross output ratio in sector j, $vago_j(t)$. For import sectors j, $vago_j(t) = 1$.

b. To obtain the direct input of capital, labor, energy, or import factor i into sector j, multiply the result of (3a) by the factor input/value-added ratio for factor i in sector j, $fiva_{ij}(t)$. For i=j for import sectors, $fiva_{ij} = 1$.

c. To obtain the total consumption of factor i, sum the results from (3b) over all 58 producing/importing sectors.

d. Call this function F_i:

F_i (fiva(t), vago(t), c(t), xseu(t), eus(t), TAD(t))

$$= \sum_{j=1}^{58} fiva_{ij}(t) * vago_j(t) * \sum_{k=1}^{58} c_{jk}(t) * \sum_{m=1}^{19} xseu_{km}(t) *$$

$$eus_m(t) * TAD(t).$$

This fundmental equation for F_i is the key to calculating the effects of the three causal factors on capital, labor, energy, and import requirements.

The effect of growth of aggregate demand

This effect is the year to year change in capital, labor, energy, or import use associated strictly with the change in the level of effective aggregate demand (TAD), with all other coefficients held at their 1977 levels. 1977 is the year of the input-output table.

Effect of Growth of Aggregate $Demand_i$ (t)
$= F_i$ (fiva77, vago77, c77, xseu77, eus77, TAD(t))
$- F_i$ (fiva77, vago77, c77, xseu77, eus77, TAD(t−1)).

The effect of changing composition of aggregate demand

This effect is the year to year change in capital, labor, energy, or import use associated strictly with the change in the relative shares of the domestic end-uses or export commodity categories in total aggregate demand.

Effect of Changing Composition of Aggregate $Demand_i$ (t)
$= (F_i$ (fiva77, vago77, c77, xseu77, eus(t), TAD(t))
$- F_i$ (fiva77, vago77, c77, xseu77, eus77, TAD(t)))
$- (F_i$ (fiva77, vago77, c77, xseu77, eus(t−1), TAD(t−1))
$- F_i$ (fiva77, vago77, c77, xseu77, eus77, TAD(t−1))).

The effect of technological change

This effect is the year to year change in capital, labor, energy, or import use associated with the changes in (a) the product mix within each end-use or export category, (b) the coefficients in the input–output table, (c) the ratio of value-added to gross output in each domestic producing sector, and (d) the direct capital, labor, energy, or import input per unit value-added for domestic producing sectors or per unit value imported for import sectors.

Effect of Technological Change$_i$ (t)
=(F_i (fiva(t), vago(t), c(t), xseu(t), eus(t), TAD(t)) (see note)
$-F_i$ (fiva77, vago77, c77, xseu77, eus(t), TAD(t)))
$-$(F_i (fiva(t$-$1), vago(t$-$1), c(t$-$1), xseu(t$-$1), eus(t$-$1), TAD(t$-$1)) (see note)
$-F_i$ (fiva77, vago77, c77, xseu77, eus(t$-$1), TAD(t$-$1))).

Note.—The expression on this line does not have to be calculated. By definition, it is the actual use of i in year (t) or (t$-$1).

FOREIGN TRADE DECISIONMAKING UNDER BALANCE OF PAYMENTS PRESSURE: POLAND VERSUS HUNGARY

By Keith Crane*

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I. INTRODUCTION [1]

This paper argues that the Polish economic system, particularly the Polish system of making decisions affecting foreign trade, was a major cause of the Polish economic collapse of 1981. The argument is developed through a comparison of the foreign trading systems in Poland and Hungary, both of which are centrally planned economies (CPEs) experiencing hard currency balance of payments problems. They are compared during periods when their governments made balancing their hard currency current accounts a priority. The comparison highlights differences in the foreign trade decisionmaking systems of the two countries which partially explain differences in the economic outcomes experienced by the two countries as their leaders sought to reduce their hard currency current account deficits.

The periods under discussion are 1976 to 1981 for Poland and 1979 to 1982 for Hungary. In 1976 the Polish authorities and in 1979 the Hungarian authorities changed economic policies of borrowing abroad to finance economic growth to policies aimed at balancing the hard currency current account. Although the burden of Hungarian debt at the beginning of 1979 was roughly the same as the burden of Polish debt at the beginning of 1976, once the policy shift was made, the Hungarians were able to close their hard currency trade deficit far faster than the Poles and at less economic cost.[2] A major factor in explaining this appears to be differences in economic systems, especially regarding foreign trade decisionmaking.

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*Rand Corporation.

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Articles in the financial and popular press often focus on Gierek's policy in the first half of the 1970's of borrowing from the West to finance investments in modern plants and equipment as the cause of Poland's collapse.[3] Although the increases in investment between 1972 and 1975 were far too rapid for the Polish construction and machine-building industries to handle, by 1976 investment began to be scaled back. In that year the Polish authorities announced a "new economic maneuver" whereby balancing the hard currency current account was to become a priority. Hard currency imports were to be limited and hard currency exports increased; by 1979 Poland was to have a surplus in hard currency trade [Wrzaszczyk, 1977, p. 15]. By 1981, however, the Polish authorities were forced to ask their bankers to reschedule the hard currency debt coming due that year. During the preceding five years the authorities had failed to close the hard currency trade deficits, choosing instead to finance them by increasing hard currency debt. As this debt mounted, so did interest and principal payments. Despite frantic attempts to increase hard currency exports and cut hard currency imports, which greatly contributed to the large declines in Polish output and consumption, these payments could no longer be met by 1981 and the request to reschedule was made.

During the 1970s Hungary also incurred large hard currency debts, primarily due to attempts to maintain former rates of increase in output and consumption despite rapidly deteriorating terms of trade. Although the Hungarians let their hard currency trade deficits mount until 1979, at the beginning of that year the Hungarian leadership implemented an austerity program designed to close the deficit in the course of a few years [Hewett, 1981]. Although growth rates declined and consumption stagnated, by 1981 hard currency trade was in surplus and progress began to be made on closing the current account deficit. Due in part to Hungary's successful management of its hard currency trade deficit, in 1982 the Hungarian National Bank was able to obtain bridging loans needed to stave off a forced rescheduling almost brought about by the withdrawal of Western banks from Eastern Europe following the imposition of martial law in Poland.

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[2] At the end of 1975 (beginning of 1976) Poland's hard currency debt-service and debt/export ratios, two measures of the burden of external debt on an economy, were 30 and 1.79; Hungary's figures at the end of 1978 were 36 and 1.42, respectively [Zoeter, 1981, p. 730; and Crane, 1983, p. 6]. Polish net material product (NMP) was 6.7 less in 1981 than it was in 1975 and 20% less than it was in 1978 [RS, 1982]. Hungarian output increased by over 6% between 1978 and 1982 [SE, 1982].

[3] See Frieden, 1982, and Cameron, 1980.

TABLE 1.—HARD CURRENCY TRADE AND NET MATERIAL PRODUCT INCREASES FOR POLAND AND HUNGARY

[Dollar amounts in millions]

Year	Poland			Hungary		
	Net Material Product (1970 = 100)	Trade balance	Current account balance	Net material product (1970 = 100)	Trade balance	Current account balance
1971	108	145	...	106	−245	...
1972	120	−270	...	112	−55	...
1973	132	−1,270	...	120	115	...
1974	146	−2,145	...	128	−580	−548
1975	159	−2,670	−3,130	135	−530	−531
1976	170	−2,930	...	139	−345	−365
1977	179	−2,155	...	150	−570	[1] −648
1978	184	−1,890	...	157	−1,110	[1] −1,242
1979	180	−1,690	...	160	−280	−586
1980	169	−980	−2,715	159	−15	−371
1981	149	25	−2,375	163	40	−883
1982	137	1,560	[2] −1,015	166	515	−79

[1] Due to missing data in the Other goods, services and income: credit column, these figures are estimates.

[2] This figure does not include roughly $2 billion of interest arrears.

Sources: Net Material Product: Poland—Rocznik Statystyczny, various years; Hungary—Statisztikai Evkonyv, various years.

Trade Balances: Poland (non-socialist trade)—1971–80: Rocznik Statystyczny Handlu Zagranicznego, 1981, p. 4; 1981–82: Biuletyn Statystyczny, March, 1983, p. 35. Hungary (hard currency trade)—1971–75: Statisztikai Evokonyv, 1975, p. 258; 1976–81: Kulkereskedelmi Statisztikai Evokonyv, 1981, p. 9; 1982: Havi Statisztikai Kozlemeny, January, 1983, p. 54.

Hard Currency Current Account Balances: Poland—1975–1981: Rocznik Statystyczny Handlu Zagranicznego, 1982, p. 52; 1982—Maly Roxznik Statystyczny, 1983, p. 68. Hungary—IMF, 1982, p. 236.

What are the differences between the two countries which led to forced rescheduling and dramatic declines in output in the case of Poland, while Hungary has been able to adhere to repayment schedules and continued to experience economic growth? Koopmans and Montias have devised a framework through which the problem of determining which factors led to the different economic outcomes may be addressed [Koopmans and Montias, 1971]. In their framework an economic outcome can be thought of as the product of the environment in which the economy operates, the economic system and the policies pursued in this system.[4] Any factor which has helped cause the differences in outcomes may be placed in one of these three categories.

A quick examination of the environmental and policy differences between Hungary and Poland during the periods of analysis indicate a surprising number of similarities, although some environmental factors and policy differences were important factors generating the different economic outcomes. More specifically, Hungary experienced a significant decline in its terms of trade, a problem Poland did not face, while Polish agriculture suffered from poor weather. The governments also adopted different agricultural policies and in pricing consumer and investment goods.

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[4] Given a specified period of time one may think of the endowments, preferences and information available to participants in an economy at the beginning of a period as the initial environment, those existing during the period as the contemporary environment and those at the end of the period as the terminal environment. An outcome is the difference in environments between beginning at the end of a period. The system may be thought of as the set of rules, informal and formal under which the economy operates. Policies are a class of contingent decisions which are announced in order to create stable expectations about future decisions of the policymaker [Montias, 1976, pp. 13–20], See Montias, 1976, for more detailed definitions of these concepts.

Although a number of authors have stressed the importance of systemic flaws in explaining the Polish economic collapse [Montias, 1982; and Fallenbuchl, 1982], a detailed analysis of the weaknesses in the foreign trade decisionmaking system, especially in comparison with systems in other CPEs, has been lacking. For these reasons this paper focuses on systemic differences between the two countries; policy and environmental differences will henceforth be ignored.

The study begins with a description of the foreign trade decisionmaking systems in the two countries. Subsequently, it analyzes the impact of these decisions on the process of hard currency current account adjustment. It concludes with a discussion of the differences in the two systems which appear to account for the different degrees of success the two countries have had in closing their hard currency current account deficits.

Data for much of the study were obtained through interviews with Polish managers during the fall of 1981 and with Hungarian managers during the summer of 1982. In these interviews managers of producing enterprises and foreign trade organizations (FTOs) were asked a series of questions concerning the types of decisions they were permitted to make, the incentives and instruments which influenced their decisions and the constraints they faced in carrying out their decisions.[5] Due to the unusual economic conditions prevailing in Poland in 1981, managers were requested to answer the questions in terms of the conditions prevailing during the late 1970s. Interviews were arranged in 28 enterprises and 10 FTOs in Hungary; due to the imposition of martial law in Poland interviews were limited to 10 enterprises and 8 FTOs. In Hungary the enterprises were chosen by the author; in Poland enterprises were selected by local branches of the Polish Bureau of Foreign Trade. A few of the enterprises were "model" exporters; however, some exporters in both samples had performed poorly in terms of meeting export targets or increasing exports. In both countries interviewees appeared to discuss frankly the problems they faced and the weaknesses they perceived in the system.

II. THE FOREIGN TRADE DECISONMAKING SYSTEMS

A. Poland

During the latter half of the 1970s Polish foreign trade was conducted in the manner of a traditional centrally planned economy.[6] Since intermediate goods were allocated by command rather than via markets, and price controls were used to suppress increases in prices of goods without corresponding control over wages, excess demand in many markets was a permanent feature of the Polish economy. Financing investments through state grants or low-interest loans coupled with pressures to fulfill gross sales plans caused excess demand for investment goods. Since demand for both intermediate and investment goods exceeded the capacity of domestic producers, there was a permanent excess demand for imports. In the face of this excess demand, Poland, like other CPEs, had to control imports; control was achieved by maintaining a monoply on foreign trade. This monopoly has been wielded through the Ministry of Foreign Trade and the FTOs.

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[5] Copies of the questionnaires are available on request from the author.

[6] Poland began to adopt a new system of economic management in 1982. Therefore, the following description does not apply to the system which presently functions in Poland. See Ledworowski, 1979, or Wanless, 1980, for more detailed descriptions of the pre-1982 system described in this paper.

In the 1970s FTOs, of which there were 66, handled all imports and exports in Poland [*Informator*, 1982]. About one third of these were supervised by the Ministry of Foreign Trade; the rest were attached to industrial branch ministries and trusts. Trade through the FTOs was regulated by the foreign trade plans by which the central authorities attempted to impose their preferences for exports and imports on the economy. The central authorities set rough targets for imports and exports by commodity group; the FTO then elaborated detailed plans for exports and imports under the close supervision of its superior institution and in cooperation with producers and final buyers. Through the course of the plan year, however, adjustments had to be made because expected exports failed to materialize or production bottlenecks developed due to shortages of inputs. Under Gierek these day-to-day decisions on the reallocation of imports were made by the trusts and the branch ministries in cooperation with the FTOs. The problems they experienced in reallocating from domestic consumption to exports and from less efficient exporters to more efficient exporters was an important determinant of the cost of external adjustment in Poland.

Managers of producing enterprises had to implement decisions to increase exports and reduce import use. Although they had far less decisionmaking authority than their Western counterparts, they had some leeway to reallocate outputs and inputs at the margin and in the interpretation of directives. Furthermore, decisionmakers at higher levels in the economy depended on enterprise managers for the information to make allocative decisions so that managers had a significant influence on such decisions.

To induce managers to act in accordance with their wishes, the authorities employed a number of incentives and instruments. Although several types of bonus schemes existed, especially for increasing hard currency exports, the managers interviewed concurred that bonuses tied to plan fulfillment were of greatest importance. The most important indicators for determining this bonus were fulfillment of gross sales targets, and by the end of the 1970s, fulfillment of hard currency export targets. Managers interviewed generally agreed that the part of the bonus tied to hard currency export plan fulfillment was their major incentive to export to hard currency areas. Pressure from superiors was ranked next in importance for spurring hard currency exports. Since trust and ministry officials determined a manager's career and could alter plan targets during the course of the year, managers had an incentive to follow their directives, even if these contradicted the plan.

Due to the importance of hard currency export plan fulfillment for bonuses, export plan targets were one of the most important instruments employed in the Polish system. Interviewees said enterprise export targets were set by bargaining between the trusts, the enterprise and the FTO; the trust had the deciding voice. These targets, however, appeared to be only provisional; all except one of the enterprise managers interviewed said hard currency export targets were changed through the course of the plan year. Bonuses were disbursed on the basis of fulfillment of the final, not the initial target. Since managers could be fairly confident that plan targets would be adjusted, if cause could be shown, these targets were a dull instrument for inducing managers to export and a poor predictor of export volume. Planning Commission interviewees said the aggregate of the initial targets had little relation to total exports at year end.

Plans were also used to determine import levels. However, since the aggregate export targets were generally not met, funds available for imports were also less than planned. Moreover, as with export targets, enterprise managers could bargain to change targets through the course of the year. Managers argued for increased imports by citing unexpected increases in orders for hard currency exports or lower than planned deliveries of inputs by domestic suppliers. In three instances interviewees said it was common practice for managers to "manufacture" above-plan hard currency export orders in order to argue for increased quotas of hard currency imports. These managers would conceal potential hard currency export orders in order to keep export targets low, and then when these orders materialized, argue for above-plan shipments of imports in order to fill export orders. In this system, practically speaking, import allocation was determined in an ad hoc manner by trust and ministry officials.

Polish enterprises simultaneously operated in two price systems: the domestic system in which raw materials prices were fixed by the state and prices on manufactured goods were calculated on a cost-plus basis, and the prices prevailing on world markets. Transactions with business partners in hard currency areas were conducted at world market prices with the exception of certain imports of raw materials.[7] Since the price ratios between manufactured goods and raw materials were higher in Poland than those prevailing on Polish hard currency export markets, opportunities for arbitrage from one market to another abounded. Moreover, the exchange rate was set at less than the marginal rate making exports less profitable and imports cheaper than they would have been at a higher rate of exchange.

The Polish authorities implemented a complex system of subsidies and taxes, partly to forestall arbitrage.[8] Export taxes were levied on raw materials and profits on exports of manufactures by one enterprise in a trust were used to offset losses incurred by other exporters in the trust. Enterprises were also granted an across-the-board subsidy on hard currency exports similar to the VAT rebate granted in the EEC.

B. Hungary

Although the preferences of the Hungarian authorities continue to determine the composition of Hungarian imports, the Hungarian system is a far cry from the traditional system of foreign trade employed in Soviet-type economies, like that in Poland. First, the restrictions on enterprise participation in foreign trade are much looser in Hungary than in Poland. Exporters of manufactured goods are readily granted export rights; enterprises which do not request export rights may choose the FTO through which they wish to trade. In some cases enterprises are granted import quotas; these enterprise may order imports directly from the foreign buyer without going through the FTO.

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[7] Raw materials prices were kept fixed in order to facilitate planning and to keep the domestic price level from rising.

[8] See Ledworowski, 1979, for a more complete description of the subsidy system.

Second, plan targets in Hungary are set by enterprises, not by the central authorities. Consequently, the authorities have to use incentives other than bonuses tied to plan target fulfillment to induce managers to make decisions consistent with central goals. The Hungarians opted to set rewards for managers primarily using an indicator based on enterprise profits.[9]

Although in terms of economic efficiency maximization of this synthetic indicator had much to recommend it over fulfillment of plan targets, it posed a problem for the Hungarian authorities when they attempted to close the current account deficit. The authorities have generally pursued full-employment, low inflation policies.[10] In order to preserve jobs in present industries and for balance of payments reasons, the government has adopted a de facto policy of prohibiting competitive imports from hard currency areas.[11] Due to the absence of domestic competition in many industries, import protection and monopoly power make it possible for some enterprises to earn monopoly profits on the domestic market. Not surprisingly, since Hungarian enterprises are price takers on hard currency export markets, they have shown a preference for the domestic market. This has made it difficult to induce enterprises to increase exports to hard currency markets.

Fears of inflation made policymakers reluctant to use devaluations to close the current account gap. Due to the Hungarian price system (discussed below), domestic prices are much more closely tied to world market prices than they are in other centrally planned economies. Consequently, a devaluation has a large, immediate impact on the domestic price level. Thus, pursuit of low rates of inflation competed with hard currency account equilibrium in determining the exchange rate.

Since the home market appeared more profitable to Hungarian enterprises than hard currency export markets, incentives other than the bonus tied to profits were necessary to induce managers to concentrate on hard currency export markets. The managers interviewed said that the most important incentive for increasing hard currency exports was not the bonus tied to profits, but the second part of their total bonus which is tied to a "complex" evaluation. This bonus was set by a board appointed by a manager's superiors on the basis of its evaluation of the manager's work. Factors which were of importance for determining this bonus included plant safety, decreases in energy use and increases in hard currency exports. In the enterprises in which interviews were held the latter factor was said to be of greatest importance. Managers in 23 of the 28 enterprises said this bonus was a significant incentive for increasing hard currency exports; managers in only five enterprises listed the bonus tied to profits as an important incentive for exporting.

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[9] $P/(W + K)$ where P=profits, W=the total wage bill and K=the enterprise's fixed assets [Csikos-Nagy, 1982, p. 304]. The Hungarian managers interviewed said this indicator determined from one half to three quarters of their bonus income; bonus income generally equaled one third to one half of base salary.

[10] See Granick, 1975, for a fuller discussion of the implications of these goals for the implementation of Hungary's economic reform.

[11] The enterprise managers interviewed stated that they were not permitted to import goods produced by domestic suppliers.

Another incentive of importance was pressure from the manager's superiors to increase hard currency exports. Although enterprises were more independent in Hungary than in Poland, the industrial branch ministry still had the deciding voice in a manager's career and in determining his salary. Since increasing hard currency exports has been a priority for the Hungarian government in recent years, managers were motivated to increase hard currency exports in order to please their superiors. In this sample, fifteen managers cited desire for recognition or pressure from superiors as an important motivation for increasing hard currency exports.

Both of these incentives run counter to the thrust of the Hungarian economic reform; according to the reform managers are to pursue profits, not the wishes of a ministry. The 1980 price system incorporated incentives more in keeping with the original spirit of the reform; it was designed in part to harness the pursuit of profits to foreign trade goals. One goal of the new price system was to make domestic price ratios closer to those prevailing on the world market. In the new system imports were priced at delivery cost plus tariffs [Csikos-Nagy, 1982, p. 322].[12] Exporters, like their Polish counterparts, received sales prices. In contrast to Poland, however, the domestic price system in Hungary became closely linked to the world market. Manufacturers which exported more than 5% of total output to hard currency markets fell under the "competitive" price rule. Under this ruling the margin (not the price) that these producers could charge on goods sold on the domestic market was linked to the margins they made on hard currency exports. For example, if the cost of earning a dollar of foreign exchange by exporting the product equaled the dollar/forint exchange rate, i.e., the price of the export equaled its cost, manufacturers could levy a 6% markup on domestically sold goods. If costs were one fourth less than the exchange rate, a 12% markup could be levied on domestic sales.[13]

These restrictions on markups on the domestic market had a twofold purpose. One was to eliminate the difference in profitability between domestic and hard currency export sales, thereby making the domestic market less attractive. In this case the reform appears to have been partially successful. Of the managers interviewed many said that prior to 1980 products sold on the domestic or ruble export markets were more profitable than products sold on hard currency markets; in these enterprises this difference disappeared after 1980.

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[12] Prices on raw materials are frozen for intervals of three months rather than fluctuating daily.

[13] Information for this section came from Marer, 1983, pp. 163-5 and Csikos-Nagy, 1982, p. 322. For a more complete discussion of the price system see these two sources.

The second purpose of the reform was to encourage managers to raise margins on hard currency exports. Although Hungary must be characterized as a price taker on international markets, Hungarian managers control a number of variables such as meeting delivery deadlines, quality control, fulfilling orders to specification, etc., which influence the markup on a commodity. Since profits are the major determinant of a manager's salary, by linking profits on domestic sales to hard currency export profits the price system ought to have provided an incentive for managers to exert more effort to control these factors and thereby increase margins. Interviewees lent little support to this hypothesis. In thirteen instances margins on hard currency exports had fallen; in only seven instances did they rise.

Despite the emphasis on the use of prices rather than commands for the allocation of resources in the Hungarian system, perennial excess demand for hard currency imports exists. In recent years greater use has been made of the exchange rate to control import flows;[14] import permits, however, have still been the primary instrument employed to control imports.[15] All import orders in Hungary must be accompanied by an import permit. These permits are issued by the Ministry of Foreign Trade which generally grants them as a matter of course for products imported in previous years. However, if a manager wishes to import a product not previously imported or in greater quantities than in previous years, the request is generally referred to a board composed of employees of the FTO through which the product is to be imported and of other knowledgeable people in the industry. At this point the enterprise management must convince the board that the import is necessary. If a substitute produced domestically or in the CMEA is availabile or the supply of hard currency is tight, the probability that the permit will be granted decreases and the length of time it takes to process the import increases. One manager argued that any hard currency import may be obtained, it just takes more effort in some cases than in others. Consequently, managers must balance the effort of bargaining for the permit against the benefit of using the hard currency import. Thus increased or diminished difficulty in obtaining import permits acts as a non-price method of rationing imports.

The profitability indicator also provided an incentive for reducing the use of inputs, including imports. All the managers said that their primary objective was to avoid a loss; if the enterprise incurred a loss, bonuses were eliminated and the management could be dismissed. Consequently, managers had a strong incentive to halt the production of loss-making products; in fact, all the managers interviewed insisted that they would not export at a loss. Thus this emphasis on eliminating losses provided a mechanism for reallocating resources from loss-making products to more profitable uses.

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[14] In 1983 the forint was devalued a number of times; devaluation was one of the conditions for obtaining IMF loans.

[15] See Gacs, 1980, for an excellent analysis of the import permit system.

III. IMPLICATIONS FOR CURRENT ACCOUNT ADJUSTMENT

Closing a current account deficit involves two processes: reducing absorption, i.e. the proportion of total output consumed or invested, and reallocating output from domestic use to exports and substituting domestically produced goods for imports. In both Poland and Hungary decisions concerning the volume of investment and consumption are made at the center and to a great extent are implemented by the center through limits on bank lending and investment quotas, on the one hand, and through price increases on consumer basics, on the other.

Decisions concerning the reallocation of output and inputs, however, are not as easily implemented by the center. Even in Poland managers had some freedom at the margin to reallocate output and to substitute one input for another. Moreover, the many daily decisions made by managers which affect quality control, product development and waste may have a significant impact on exports and imports. Consequently, the incentives and instruments which influence managers' decisions in these areas determine the ease with which resources may be reallocated in the system and current account equilibrium may be attained.

A. Communications With Clients

If information between foreign and domestic partners flows more rapidly and more accurately in one system than another, transaction and communication costs ought to be less and the possibilities for increasing exports ought to be greater. One striking difference in the two systems is in contact with foreign clients. In Hungary several of the enterprises had obtained their own export rights and set up their own export bureaus. Managers in these enterprises concurred that these bureaus had enabled them to increase the volume and profitability of their hard currency exports. They said that since they could directly employ salesmen through the bureaus, they could motivate them more effectively; they said the bureaus had also greatly improved communications with clients. Managers of enterprises which did not have their own export rights often complained of poor service and low motivation in the FTOs. Several of the Hungarian managers took sales trips abroad and were in frequent contact with their clients. In Poland, on the other hand, one manager complained of being denied contact with a client; the FTO insisted on conducting all discussions and negotiations. None of the Polish enterprise managers interviewed indicated they had traveled to the West on export business.

B. Incentives to Export

In both countries managers said bonuses tied to increasing or meeting targets for hard currency exports were the most effective incentives they faced to export to hard currency areas. The second most oft-cited incentive was pressure from the manager's superiors in the trust or ministry.

There were important differences in the incentives employed, however. In Poland, bonuses were tied to fulfillment of an absolute target; although over-fulfillment was rewarded, managers were cognizant that targets in succeeding years would be "ratcheted", i.e., be set slightly above the level of the past year's performance; this practice acted as a disincentive to increase exports. In one instance a manager stated he had turned down an order for hard currency exports because of ratcheting. In most years the volume of his enterprise's hard currency exports was low. One year a foreign client wished to make a large order; the manager declined because he was afraid that due to the size of the order export targets would be raised in the future to levels he would not be able to achieve. The Polish system also provided managers with an incentive to understate their export capabilities in order to keep export targets low, since low targets are easier to fulfill then higher targets. The coupled with ratcheting created a mechanism by which managers were discouraged from trying to increase hard currency exports to the maximum possible level.

Although Hungarian managers said they were motivated to export by bonuses tied to increases in exports, not profits, the Hungarian system did not appear to have the rigidities inherent in the Polish system. Bonuses for hard currency exports were awarded on the basis of relative, not absolute performance. Export performance in Hungary was measured by changes in the value of hard currency exports; an enterprise was judged in comparison with other enterprises in the same industry and in comparison with the previous year's level of exports. Therefore, in contrast to managers in Poland, managers in Hungary had a more open-ended maximum and a more competitive environment; they needed to strive to do as well as other managers in their industry. Thus incentives in Hungary were better geared to pushing managers to exploit all opportunities to export than those in Poland.

The greater emphasis on profits in Hungary than in Poland appears to be another important factor in explaining Hungary's superior performance in balancing its hard currency current account. All the enterprise managers in Hungary were adamant that they did not export at a loss, although many said they continued to produce loss-making products for the domestic market due to pressure from the ministry. If an export was unprofitable, the product was either modified or export sales were stopped. In Poland, on the other hand, some managers complained that they were forced to suffer losses on exports because otherwise targets would not be met; export targets were of greater importance than profits.

This difference appeared to have a significant effect on the composition of exports. Although the rate of technological change appears to be much slower in Hungary than in most market economies [Major, 1980] and [Kovacs, 1980], fear of losses spurred managers to attempt to modify old products or develop new ones so that exports remain profitable. Similar incentives were absent or weak in the Polish system, because of the emphasis on achieving a specified volume of hard currency exports. The interviews provided some evidence to indicate that this incentive stimulated more innovative behavior in the Hungarian system than exists in the traditional CPE: when queried concerning the source of innovations in exports and export production, managers in only one of the ten Polish enterprises said the enterprise was the source of the innovation. In contrast, managers in twelve of the 28 Hungarian enterprises, over 40%, cited the enterprise as the source of the innovation.

C. Incentives To Curb Import Use

The different incentives, bonuses tied to profits in Hungary and bonuses tied to gross sales in Poland, also affected the allocation of hard currency imports. Since most imports in both countries are inputs, import demand is a derived demand. In Hungary as production of loss-making exports was halted, imports were freed to be used in the production of other, more profitable exports. In contrast, the Polish system appeared to have no mechanisms for inducing enterprise managers to voluntarily forgo using hard currency imports. On the contrary the system appeared to be inadvertently designed to increase import use. Emphasis on gross sales and hard currency export target fulfillment over profits introduced a bias towards increasing output at the enterprise, trust and ministry levels and, consequently, a bias towards increasing demand for inputs, including imports. This problem was compounded because price differentials did not appear to reflect quality differences between domestically produced inputs and hard currency imports. None of the enterprise managers complained of the cost of imported inputs, while several of the FTO managers said they were too low; thus the price system provided little incentive to conserve on imports. Enterprise managers faced incentives to substitute hard currency imports for domestically produced goods, as well as bargain for increased quantities of inputs in general. In this system it is not surprising that managers resorted to the stratagems described above in order to increase their import quotas.

Since Polish enterprise managers had no incentives to voluntarily reduce import use, decisions on the allocation of imports had to be made at the center. Therefore, the efficiency with which imports were allocated in Poland depended on the quality of decisions made by the center. A number of factors worked against optimal decisions in this system. First, the quantity of information needed concerning input needs, potential exports and domestic sales and output tradeoffs between enterprises was so great that planners lacked the information-handling capacity to manipulate this information so that feasible, let alone optimal decisions could be taken. Second, since enterprise requests for imports exceeded the quantity of imports purchased, not all requests were fulfilled. Therefore managers had an incentive to exaggerate their import needs so that they would be assured of minimally necessary imports of inputs, even after their requests were reduced. During much of the 1970s bottlenecks generated by this system were eliminated by allowing above-plan imports financed by increased borrowings from the West. However, as it became imperative for Poland to close its trade deficit, these imports were reduced.

Interview data illustrate the allocative inefficiencies of the system at this point. Shortages of hard currency imports were listed most often (sixteen times) as a binding constraint on increasing hard currency exports by the enterprise and FTO managers interviewed. The next most frequently cited constraint was shortages of domestically produced inputs. According to these managers hard currency exports could have been increased, if the enterprises had been permitted to purchase needed hard currency imports, but planners lacked the information or incentives to reallocate hard currency imports so as to make this possible.

As stated above, the Hungarians also resorted to a non-price mechanism, import permits, for the allocation of hard currency imports. The use of import permits like import plans have efficiency costs. Shortages of hard currency imports were cited thirteen times by interviewees as curbing hard currency exports. The use of import permits in Hungary, however, appeared to have two advantages over the system of quotas used in Poland. A number of enterprises were given quotas with which they could make purchases directly without going through FTOs; according to managers in these enterprises this right allowed them to purchase what they needed when they needed it, thereby eliminating administrative costs and production costs associated with delays and forced substitution of inputs. Second, by shortening or lengthening the queue for hard currency import permits, planners can control import demand. The managers interviewed refrained from requesting certain imports in times when hard currency was in short supply. On the other hand, if they felt a particular import was essential for the operation of the enterprise they would expend the time and energy needed to obtain a permit. Thus the Hungarian system introduced a mechanism for self-regulation of import demand, albeit an inefficient one.[16]

D. Prices and the Pursuit of Comparative Advantage

The cost of current account adjustment in Hungary and Poland depended on the degree to which the two countries were able to exploit their comparative advantages. If inputs had been transferred to the most profitable exporters and if those imports which provided the least marginal benefit had been eliminated, the costs of adjustment would have been minimized. Therefore, the efficiency of a foreign trade decisionmaking system depends on its effectiveness in reallocating imports towards their most efficient uses and inducing the most efficient producers to increase exports.

In this regard the instruments and incentives employed in the Hungarian system appear to have been superior to those in the Polish system. One such instrument was prices. To reiterate, Polish enterprises operated in two price systems: the one prevailing on the world market and the domestic system in Poland. Since price ratios between manufacturers and raw materials were greater in Poland than on export markets, domestic prices were poor guides to the economic cost to the country of using one combination of inputs or another and export profits were often not a good indicator of comparative advantage.

In Hungary, on the other hand, domestic and world market prices were closely linked; they informed managers much better of the economic cost of using one input mix or another. Moreover, since profit margins on products sold on the domestic market were determined by margins on hard currency exports, managers had an incentive to pursue comparative advantages; emphasis on targets for export volume in Poland severely limited the role of comparative advantage in decisionmaking at the enterprise level.

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[16] The import permit system appeared to preserve previous patterns of import allocation. Managers readily received quantities and assortments of imports similar to those of previous years. It became difficult to obtain imports only if quantities were increased or the assortment changed. Consequently, the system was a poor one for reallocating imports. See [Gacs, 1980] for a more detailed discussion of the drawbacks of this system.

IV. CONCLUSIONS

This study indicates there were substantial differences in the effectiveness of the incentives and instruments the Polish and Hungarian authorities used to induce enterprise managers to make decisions consistent with closing their hard currency current account deficits. To reiterate, current account adjustment consists of two processes; one, reducing absorption (consumption and investment) below output so that a surplus will be available for export and two, reallocating output from domestic to export markets and substituting domestically produced goods for imports. The authorities in both countries had similar instruments available for reducing absorption. The major difference in the two systems is in the efficacy of the instruments employed to reallocate output and inputs. It is here that the Hungarian system appears to have been more effective.

In both countries the authorities attempted to effect the reallocation of output and inputs through drives to increase exports and reduce import use. A secondary goal, also of importance, was to increase the efficiency with which imported inputs are employed. Responses by enterprise managers in the two countries indicated that the Hungarian system was superior in all three areas. The Hungarian system provided enterprise managers with open-ended incentives for increasing exports while the Polish system was geared to the fulfillment of absolute targets. Polish managers listed no incentives for decreasing the use of hard currency imports and several incentives for substituting these imports for domestically produced goods. Although quality differences between hard currency imports and inputs available on the domestic market or from the CMEA were such that Hungarian managers preferred the former, they were encouraged to substitute domestically produced inputs for imports through devaluations (devaluations have made hard currency imports more expensive) and by making import permits increasingly difficult to obtain. The emphasis on profits in Hungary in combination with a price system which was designed to reflect price ratios on the world market (although with some distortion) introduced a mechanism in the economy which encouraged managers to pursue comparative advantage. Polish producers, who were more concerned with attaining export targets, faced much weaker incentives to stop the production of loss-making exports or increase the production of profitable exports. Moreover, Polish prices were poor indicators of the economic cost of exports; they failed to guide managers towards optimal input mixes. Thus the Hungarian system was better adapted to inducing managers to make decisions in accordance with comparative advantage.

Although it would be impossible to quantify the impact of systemic differences on the different success with which Poland and

Hungary have sought to close their hard currency current deficits, the study indicates that the incentives and instruments employed in Hungary induced managers to make decisions concerning foreign trade which were far more consistent with central objectives than those employed in Poland. Incentives and instruments employed in Hungary better facilitated increasing exports, reducing imports and reallocating inputs to more efficient uses than those employed in Poland. This conclusion should not be construed, however, to imply that the Hungarian system efficiently guides the economy toward external equilibrium. Although the system appears to function better than that employed in Soviet-type economies, the protected domestic market, the import permit system, and the continued influence of the central authorities and ministries on the allocation of inputs indicate that the system suffers from large losses in allocative efficiency. Hungary's continuing balance-of-payments problems indicate that the system still does not incorporate mechanisms for rapid, allocatively efficient adjustment to external disequilibrium.

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POLISH AGRICULTURE: POLICY AND PROSPECTS

By an Analyst of the Central Intelligence Agency

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SUMMARY

The agricultural sector has always been of great importance to the Polish economy, contributing an average of 25 percent of national income and employing an average of one-third of the total labor force during the last three decades. Until the early 1970s, however, the sector generally was neglected by successive Communist regimes because of the push for industrial development and ideological reluctance to support private sector farmers (who in 1970 tilled 80 percent of the land under cultivation). A major policy change occurred in 1971, when the Gierek regime—eager to placate disgruntled consumers—tried to boost output in the agricultural sector by increasing farmers' incentives. Helped by good weather, Warsaw succeeded in increasing output in the period 1971-1974. The farming boom faltered after 1974 because of poor weather and because the regime again slighted the development of agriculture and slipped back into traditional habits of discriminating against the private farmer.

Throughout the 1970s the government implemented policies to boost consumption of food items and maintain low retail prices even though domestic production stagnated later in the decade. Domestic food supplies were supplemented by agricultural imports from the West financed on credit, as well as by cuts in food exports. By the end of 1981, the hard currency deficit in the agricultural-food trade account was almost $2 billion.

Since December 1981, the regime has had to cut agricultural imports drastically because of its financial problems and has tried to adjust by increasing production and government procurement and restricting consumer demand. While crop output generally has been average or above average because of good weather, livestock production has declined because of cuts in Western feed imports. In 1983, the government procured sufficient amounts of grain to cover human needs, but livestock procurements dropped. Meanwhile, budget subsidies for food fell in 1982 but rose in 1983 because retail prices did not rise enough to cover the increased prices the regime

paid to farmers. Political pressures prompted the regime to moderate its efforts to restrict consumption of agricultural products, leading in 1983 to unplanned purchases of food in the West and some diversion to domestic markets of agricultural goods intended for export.

By 1990, Poland plans moderate increases in production and food consumption and balanced agricultural trade. To meet these goals Warsaw claims that it will increase investment in agriculture, boost economic incentives to private farmers, and hold down grain and other food and agricultural imports and increase food exports. The government so far has not pursued effectively these policies. The regime has already cut back investment in the agricultural sector from originally planned levels and is not increasing procurement prices enough to keep up with rising costs of inputs and higher taxes on private farmers. At the same time, the regime's efforts to placate consumers led to greater than planned increases in some agricultural imports in 1984.

I. AGRICULTURAL PERFORMANCE AND POLICY, 1970-1981

During the early 1970s, Gierek gave greater support to private farmers by increasing purchase prices of grain and livestock, reducing land taxes, abolishing compulsory deliveries, and granting private farmers national health insurance and retirement benefits. Gierek's efforts—together with favorable weather—helped lead to a short-lived agricultural boom that was unprecedented in Poland's postwar development. Between 1970 and 1974, overall agricultural production increased by 4.7 percent annually, grain production rose by an average of 9.0 percent a year, cattle numbers by 4.7 percent, and hogs by 12.6 percent (Table 1). Output of other farm products such as milk, vegetables, and fodder crops increased significantly.

TABLE 1.—POLISH AGRICULTURAL PRODUCTION, IMPORTS AND EXPORTS

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Agricultural Production[1] (Index 1970=100)	100.0	104.3	111.0	117.4	120.0	118.3	115.3	118.8	128.9	125.8	116.0	107.4	112.8
Crops:													
Grain (million tons)[2]	16.3	19.9	20.4	21.9	23.0	19.6	20.9	19.4	21.5	17.3	18.3	19.7	21.2
(1970=100)	100.0	122.1	125.2	134.4	141.1	120.2	128.2	119.0	131.9	106.1	112.3	120.9	130.1
Imports (thousand tons)[3]	[4] 2,479	3,023	3,194	3,317	4,155	4,025	6,131	5,75[illegible]	7,366	7,338	7,811	7,218	[4] 4,247
Exports (thousand tons)[3]	[4] 200	95	208	410	262	104	70	22	6	67	6	0	0
Potato production:[2]													
(Million tons)	50.3	39.8	48.7	51.9	48.5	46.4	50.0	41.1	46.6	49.6	26.4	42.6	32.0
(1970=100)	100.0	79.1	96.8	103.2	96.4	92.2	99.4	81.7	92.6	98.6	52.5	84.7	63.6
Sugar beet production:[2]													
(Million tons)	12.7	12.6	14.3	13.7	13.0	15.7	15.1	15.6	15.7	14.2	10.1	15.9	15.1
(1970=100)	100.0	99.2	112.6	107.9	102.4	123.6	118.9	122.8	123.6	111.8	79.5	125.2	118.9
Livestock[2] (June census):													
Cattle (million)	10.8	11.1	11.5	12.2	13.0	13.3	12.9	13.0	13.1	13.0	12.6	11.8	11.9
(1970=100)	100.0	102.8	106.5	113.0	120.4	123.1	119.4	120.4	121.3	120.4	116.7	109.3	110.2
Hogs (million)	13.4	15.2	17.3	19.8	21.5	21.3	18.8	20.1	21.7	21.2	21.3	18.5	19.5
(1970=100)	100.0	113.4	129.1	147.8	160.4	159.0	140.3	150.0	161.9	158.2	159.0	138.1	145.4
AGRICULTURAL PRODUCTS													
Sugar production:[2]													
(Million tons)	1.5	1.6	1.7	1.7	1.4	1.9	1.6	1.8	1.8	1.6	1.1	1.7	1.6
(1970=100)	100	106.7	113.3	113.3	93.3	126.7	106.7	120.0	120.0	106.7	73.3	113.3	106.7
Imports (thousand tons)[3]	[4] 12	44	37	29	50	41	16	30	60	62	124	185	[4] 72
Exports (thousand tons)[3]	[4] 306	98	352	425	180	73	354	272	285	105	26	14	[4] 163
Meat production:[3]													
(Thousand tons)	2,182	2,232	2,480	2,729	3,061	3,062	2,896	2,883	3,142	3,257	3,141	2,526	2,545
(1970=100)	100	102.3	113.7	125.1	140.3	140.3	132.7	132.1	144.0	149.3	144.0	115.8	116.6
Imports (thousand tons)[3]	[4] 40	153	65	55	6	16	46	104	33	2	52	188	[4] 113
Exports (thousand tons)[3]	[4] 157	174	173	194	234	209	157	142	153	167	162	82	[4] 65

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[1] Source: L.W. International Finance Research, Inc., Agricultural Output, Expenses and Depreciation Gross Product and Net Product, OP-56, 1979; OP-76, 1983.

[2] Polish Statistical Office, Rocznik Statystyczny, 1971–83.

[3] USDA, Economic Research Service, Eastern Europe: Review of Agriculture in 1981 and Outlook for 1982, Supplement 3 to WAS-27, Washington, D.C., June 1982; Review of Agriculture in 1982 and Outlook for 1983, Supplement 3 to WAS-31, Washington, D.C., June 1983.

[4] Polish Statistical Office, Rocznik Statystyczny Handlu Zagranicznego, 1972, 1983.

The farming boom faltered, however, after 1974 and grain production stayed at 1975 levels, surpassing 20 million tons only in 1976 and 1978. The potato and sugar beet harvests on average stagnated in the second half of the decade and then fell to record lows in 1980. Cattle and hog production were at 1974 levels in 1980. Livestock numbers stagnated or fell every year after 1978. Although weather was partly to blame, agriculture's poor performance in the late-1970s reflected chronic neglect of the sector that could not be made up for by the increased attention it briefly garnered in the early 1970s.

The following are some of the long-standing obstacles to improvement in agricultural performance.

Little Investment in Agriculture.—During the post-war era, successive regimes failed to invest sufficiently in agriculture. On average only 11 to 16 percent of the state investment budget went to agriculture—although the sector accounted for about 25 percent of GNP in the 1970s—while industry's share in investment was about 40 percent.[1] The government did not make available enough modern machinery and high-quality seeds and failed to upgrade the rural infrastructure—roads, storage facilities, and irrigation projects. Weather damage to crops in the late 1970s, for instance, could have been partially reduced if the state had previously invested more in flood control, land improvement, and the construction of transport and storage facilities.[2]

Discrimination Against the Private Farmer.—Poland is highly dependent on private farming, which accounted for about 80 percent of gross farm production during the 1970s.[3] The government, however, has failed to give private farmers sufficient economic and political support. In the 1950s and 1960s Warsaw established compulsory delivery quotas for products that required private farmers to sell to the state at low prices, and at the same time the state deprived them of many farm inputs, especially key items such as tractors and fertilizers, by allocating them instead to socialized farms. The Gierek regime lifted compulsory deliveries and raised procurement prices in 1971, but by the middle of the 1970s, returned to policies that discriminated against private farmers.[4] As a result, by 1979, tractors could be found on only one of 21 average-size private farms (2 to 5 hectares [5]) while other private farmers depended on horses to farm their land. In 1979, the amount of fertilizer provided private farms per hectare of land was only half that allotted to state farms.[6] Relative to land area and livestock numbers, state farms also received more machinery and equipment and had greater access to services of veterinarians and soil scientists. As a result, the socialized sector of agriculture has a much higher capital-to-labor ratio than private farming.

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[1] Rocznik Statystyczny, 1974, p. 183; 1981, p. 182.

[2] Rzeczpospolita, No. 89, April 28, 1982.

[3] Maly Rocznik Statystyczny, 1983, p. 159. During the same period, state farms contributed 16 percent of production; collectives 3 percent; and associations, about 1 percent of output. (Associations demonstrate new farming techniques and provide services such as plowing and harvesting to private farms.)

[4] William Newcomb, Polish Agriculture: Policy and Performance in the East European Economic Assessment, Part 1, A Compendium of Papers, Joint Economic Committee, Congress of the United States, February 27, 1981.

[5] Rocznik Statystyczny Rolnictwa i Gospodarki Zywnosciowej, 1982, p. 131.

[6] Ibid, p. 165.

The government has limited the size of private farms, and this factor—combined with the now-forbidden tradition of dividing a father's land among his surviving sons—has meant that many private farms are very small. In the early 1950s, private farmers were not permitted to hold more than 15 hectares (1 hectare equals 2.47 acres). This subsequently was increased in the 1970s; by the end of the decade farmers were allowed to own 50 hectares of land. But other factors made private farmers reluctant to acquire more land. Local officials have remained a stumbling block to consolidating private farms by delaying approval of land sales to prosperous farmers and often using their controls over borrowing to prevent purchases of land by private farmers. Moreover, chronic shortages of machinery have discouraged private farmers from acquiring more land. As a result, in 1981 only 5 percent of farms were over 15 hectares.[7]

The regime also has failed to ensure the profitability of private farm production. In the early 1970s, Gierek temporarily increased the real income of private farmers by raising procurement prices much more than input costs. In 1974, however, input prices were increased by 10 percent while purchase prices rose only 7 percent. Between 1970 and 1981, according to a recent study, input prices for private farmers rose 128 percent, while increasing only 58 percent for state farms.[8] In real terms, private farm income increased almost 20 percent from 1970 to 1974, but stagnated between 1975 and 1980, dropping by 5 percent in 1979 and again by 8 percent in 1980.[9] At the same time, the real income of urban workers increased about 30 percent from 1970 to 1974 and by some 10 percent between 1975 and 1980.

In 1981, almost 50 percent of Poland's private farm families depended to some extent on non-agricultural income. Because second jobs diverted these people from farm work, yields reportedly are 20 to 30 percent lower on their farms than on other private farms of similar size or soil fertility.[10] The regime also claims that output is lower because of lack of education among the rural population. For example, a 1983 government survey [11] concluded that a key factor contributing to yields some 30 percent below average on private farms was the fact that 24 percent of private farmers in the survey did not have an elementary education.

Private farmers, moreover, have invested little to improve their land because they believed it would be eventually confiscated by the state, either by force or after their retirement. Low procurement prices—that restrict the private farmers' incomes and hurt incentives to increase investment and output—have discouraged them from building more storage facilities, updating farm implements, and improving soil management.

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[7] Rocznik Statystyczny 1982, p. 234.

[8] L.W. International Financial Research, Inc., Agricultural Output, Expenses and Depreciation Gross Product and Net Product in Eastern Europe, Research Project on National Income in East Central Europe, Occasional Paper No. 76, 1983, p. 32.

[9] Rocznik Statystyczny Rolnictwa i Gospodarki Zywnosciowej 1982 p. 361.

[10] Summary of World Broadcasting, Warsaw Home Service, Oct. 7, 1976, EE/5332/B/7.

[11] Sztandar Mlodych, Jan. 20, 1983, p. 1–2.

Despite all of this neglect, according to a 1980 report by the Polish Academy of Sciences, private farms have been much more efficient than state farms. The report claims that in 1979 the private farm sector generated 0.414 zloty worth of net output per 1 zloty of capital stock, while the socialized sector produced only 0.166 zloty. Furthermore, grain output per kilogram of mineral fertilizer sown was 5.5 kilograms on private farms compared to 2.5 kilograms for state farms. Energy consumption per 1000 zloty worth of final output was 22 zloty in private farming and 72 zloty in the socialized sector.[12]

Manpower Drain.—As in other countries, many young farmworkers have migrated to the cities in the last three decades. The number of farmworkers declined from 54 percent of total employment in 1950, to 43 percent in 1960, 34 percent in 1970 and down to 29 percent in 1980.[13] There are many reasons for the manpower drain out of the agricultural sector. Many of the young undoubtedly are attracted by the higher incomes and better lifestyles associated with urban life. Living conditions obviously are much poorer in the countryside. Only 21 percent of rural households had indoor bathrooms in 1979, for example, and 36 percent running water. Refrigerators were in 59 percent of these homes and gas connections in 1.5 percent.[14] Some young people are probably frustrated by the tremendous amount of government red tape involved with farming and the lack of material incentives. Regime officials estimate that farmers spend an average of 72 workdays away from the fields trying to handle administrative and other matters at government offices.[15] The age of private farmers consequently has risen; about 30 percent of private farmers in 1981 were over 60 years of age.[16] Additionally, some older farmers have been enticed off the land by liberalized retirement benefits—granted in 1980—which allow private farmers to retire at age 65 for men and 60 for women if they surrender their land to the State Land Fund or to younger relatives.

The many unsolved problems of the agricultural sector prompted private farmers to organize Rural Solidarity in early 1981 after urban workers had formed their Solidarity trade union. The farmers union, which claimed membership of 2 million of Poland's 3.9 million private farmers, won a number of concessions from the regime. In the so-called "Rzeszow agreement" signed in 1981, the government promised legislation to increase investment in agriculture, sell more land to private farmers, increase farm credits and subsidies, and generally maintain a favorable price-cost ratio. After long delays and much debate, the regime kept some of these promises—especially those relating to liberalization of land ownership and transfer—but others, particularly those regarding profitability, still had not been fulfilled by the end of 1983.

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[12] Tygodnik Powszechny No. 13, March 27, 1983.

[13] Rocznik Statystyczny 1983, p. 52.

[14] Contemporary Poland, January 1983, p. 16.

[15] Rzeczpospolita, February 11, 1983.

[16] Rocznik Statystyczny Rolnictwa i Gospodari Zywnosciowej 1982, p. 26.

II. AGRICULTURAL TRADE, 1970–1981

Despite the increase in output in the first half of the 1970s, the regime had to expand imports of agricultural products and food to satisfy growing consumer demand. The value of hard currency food and agricultural imports increased over three times between 1970 and 1974 while exports increased by 86 percent. Annual grain imports increased from 2.5 million tons in 1970 to 4.2 million tons in 1974 (Table 1). Over the same period, the regime expanded imports of coffee, tea, cocoa, and spices by over 40 percent.[17]

Agricultural and food imports continued to grow in the second half of the 1970s as domestic output stagnated. The value of hard currency imports of these goods increased over 100 percent between 1975 and 1980. Grain imports increased from 4.0 million tons in 1975 to 7.8 million tons in 1980 and imports of coffee, tea, cocoa and spices rose 39 percent from 1975 to 1980.[18] While food and agricultural imports from the West comprised 15 percent of total hard currency imports in 1975, their share grew to 46 percent in 1981 (Table 2). By 1981, Poland was dependent upon the West for over 80 percent of its imports of foodstuffs and agricultural products, compared with 60 percent in 1970. About 23 percent of total grain consumed came from the West, and one-third of meat consumption depended on imports of grain and fodder.[19]

TABLE 2.—THE IMPORTANCE OF AGRICULTURAL PRODUCTS IN POLISH TRADE [1]

[In billions of U.S. dollars]

	1965	1970	1975	1979	1980	1981	1982
Imports, Total	2.34	3.61	12.75	18.16	19.44	16.16	14.89
Of which:							
Western	0.79	1.13	6.80	8.04	8.49	5.26	3.76
Food and agriculture	0.43	0.45	1.41	2.36	2.86	3.01	2.02
Of which Western	0.26	0.28	1.04	1.95	2.43	2.47	1.26
Exports, Total	2.23	3.55	10.51	16.86	17.25	13.65	15.63
Of which:							
Western	0.82	1.28	4.12	6.35	7.51	5.00	4.83
Food and agriculture	0.44	0.45	1.41	1.43	1.30	0.81	0.92
Of which Western	0.35	0.41	0.68	1.05	1.03	0.64	0.63

[1] Rocznik Statystyczny Handlu Zagranicznego 1975, 1983.

Western credits financed much of the food and agricultural imports in the second half of the 1970s and the early 1980s. From 1975 to 1980, Poland used $7.5 billion in credits to finance agricultural imports—largely grain—mainly from Canada, France, Great Britain and the U.S.[20] In 1981, for example, Canada granted Poland a $500 million two-year government guaranteed credit to import from 1.0 to 1.5 million tons of grain annually. In 1980 and

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[17] FAO Trade Tapes, 1981 edition.

[18] Ibid.

[19] According to an article in Zycie Gospodarcze, March 28, 1982, farms were not very efficient in their use of imported grain. Fodder input per unit of animal production was higher than in the rest of Europe and kept growing. During 1971–75, 7.67 grain units in fodder were consumed per unit of convertible animal products, but in the next five years this increased to 7.71 grain units.

[20] Zycie Gospodarcze, March 28, 1982, p. 6.

1981, the French granted Poland credits to purchase 1.2 million tons of grain, while the British provided $30 million worth of grain financing in 1980. In the late 1970s and the early 1980s, the U.S. extended credits totaling about $2.8 billion under the CCC program. In 1981 alone, the CCC financed $645 million worth of U.S. agricultural exports to Poland—about 85 percent of total U.S. agricultural exports to Poland in that year.

As agricultural imports from the West increased, the importance of CEMA countries as providers of agricultural commodities declined. Whereas these countries supplied 38 percent of Poland's agricultural imports in 1970, the figure had slipped to 15 percent by 1980. The USSR was the largest CEMA supplier of food and agricultural products to Poland.[21]

Poland's total exports of food and agricultural goods did not match the increase in imports of these goods. Total hard currency exports of food and agricultural goods rose from $410 million in 1970 to a peak of over $1 billion in 1979, then fell to $630 million in 1982 (Table 2). The growth of hard currency food and agricultural exports did not keep pace with the growth of total exports: from 1970 to 1979 total exports increased almost five times, while agricultural and food exports only tripled. The share of these exports in total sales to the West declined almost annually from 30 percent in 1970 to 13 percent in 1982.[22] Exports of agricultural goods did not increase as rapidly as expected in the second half of the 1970s because of lower agricultural production and increased diversion of these goods into the domestic market. Over 90 percent of total agricultural exports to the West—mainly consisting of processed meat and live animals—were sold to Western Europe and the United States.

Poland's hard currency agricultural trade balance therefore deteriorated rapidly during the 1970s, moving from a surplus of $130 million in 1970 to a $1.8 billion deficit in 1981. In addition to the factors noted above, part of this shift was due to deteriorating terms of trade as prices of feed imports increased while prices of livestock products tended to stabilize.[23]

III. CONSUMER POLICIES, 1970–1981

The Gierek regime tried to win the loyalty of the workers by providing increased amounts of higher quality food at low prices. Between 1970 and 1974, Polish diets improved considerably. Per capita consumption of meat increased an average of 5.5 percent annually, eggs 2.5 percent, fats 2 percent, and sugar 2.8 percent. At the same time, consumption of less desirable foods, such as potatoes and grains, decreased almost 2 percent annually (Table 3).

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[21] Rocznik Statystyczny Handlu Zagranicznego 1981, p. 220.
[22] Rocznik Statystyczny Handlu Zagranicznego 1981, p. 8.
[23] FAO Trade Tapes, 1981 edition.

TABLE 3.—POLAND: PER CAPITA CONSUMPTION OF SELECTED FOOD PRODUCTS [1]

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Meat (kilograms)..	53.0	56.1	59.3	52.1	65.6	70.3	70.0	69.1	70.6	73.0	74.0	65.0	58.5
Milk (liter)..	262	266	263	263	261	264	258	263	264	264	262	257	255
Eggs (units)..	186	193	196	202	205	209	214	214	219	221	223	227	200
Sugar (kilograms)..	39.2	39.6	40.9	42.4	43.9	43.2	43.9	41.5	42.7	43.9	41.4	33.4	41.8
Fish (kilograms)..	6.3	6.4	6.8	7.2	7.3	7.2	7.7	7.6	7.3	7.6	8.1	7.3	6.0
Cereals (kilograms)..	131	128	127	125	123	120	119	122	120	120	127	121	124
Potatoes (kilograms)..	190	189	187	183	177	173	171	168	166	163	158	157	161

[1] Polish Statistical Office, Rocznik Statystyczny, 1971–83.

Consumption of quality foodstuffs continued to rise from 1975 to 1980, but the annual growth rate slowed largely because of shortfalls in domestic output. Consumption of meat rose only 1 percent annually in the last half of the decade and that of eggs rose 1.3 percent. Consumption of milk stagnated, while that of sugar fell by nearly 1 percent each year. At the lower end of the quality scale, cereal consumption rose 1.1 percent annually, and potato consumption fell 1.8 percent.

Budget subsidies continued to grow because the government raised retail prices only by marginal amounts in order to avoid discontent. In the early 1970s, food price increases averaged only about 2 percent annually; in the late 1970s price rises were about 6 to 7 percent each year. By 1980, about 40 percent of the state budget was earmarked for food subsidies. Meanwhile, money incomes increased substantially—doubling between 1970 and 1981[24] and creating a demand for food items that the regime was unable to satisfy. Toward the end of the decade, as long lines formed outside food stores, farmers increasingly sold their produce for higher prices on the black market. In 1981, almost one-fourth of private farms made no sales to the state[25] leaving the government unable to fulfill its procurement plans, especially for meat and grain. In 1981, retail sales of food in the socialized market measured in constant prices decreased 8 percent from 1980 levels and the amount of meat for sale by the state decreased 17 percent.[26] In 1981 the regime was forced to establish rationing programs for meat, which were later extended to almost all major foodstuffs. By the end of 1981 per capita consumption of many quality foods slid back to the rates of the early 1970s, leaving the consumer only marginally better off than at the beginning of the decade (Table 3).

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[24] Rocznik Statystyczny 1982, p. 85.

[25] Ideologia i Polityka, March 1982, p. 26–28 as provided by Translations from the Joint Publications Research Service 81229, July 8, 1982.

[26] Rocznik Statystyczny 1982, pp. 324, 329.

IV. THE AGRICULTURAL SECTOR AFTER DECEMBER 1981

The main goals of the Jaruzelski regime have been to reduce agricultural and food imports by boosting domestic production, encouraging private farmers to sell more to the state, and reducing consumer demand. By the end of 1983, Warsaw had succeeded in increasing overall agricultural production—largely as a result of good weather—and in boosting grain procurements from private farmers. Livestock production, however, has fallen below planned levels, and the regime—for political reasons—has not been able to restrict demand as wages have risen faster than prices. Warsaw has reduced its agricultural and food trade deficit, but largely because of the lack of Western credits. Finally, the regime has made little progress in removing the obstacles that have long impeded improvements in the agricultural sector while it has added to other problems as a result of some of its actions.

1982.—The martial law regime tried to maintain domestic market supplies by using a combination of threats and incentives to encourage farmers to increase production and sales to the state. On the one hand, the regime threatened to reinstate compulsory deliveries and deployed military teams to the countryside to encourage farmers to sell to the state. The government also refused to sell key inputs to farmers who did not make a minimum amount of sales to the state. On the incentive side, it extended credit for purchases of agricultural inputs and continued subsidies on machinery and fertilizer in short supply. The regime offered to pay farmers who delivered grain above contracted amounts with interest-bearing "grain bonds" redeemable at higher prices in 1983-85. It also attempted to underscore its support of private farmers by securing parliamentary approval of several measures that had been introduced in 1981, including bills liberalizing farm inheritance and pensions and increasing the maximum farm size from 50 to 100 hectares.

The regime failed, however, to keep its promise to implement price policies that would ensure profitability for the private farmer. Prices of farm inputs, for example, rose by over 35 percent in 1982 compared to 1981, while procurement prices of all farm goods increased by an average of only 21 percent. As a result, the real income of the private farmer fell about 26 percent from 1981 levels.[27] The government also failed to increase supplies of inputs to agriculture even though it directed enterprises to increase output for the private farm sector. Consumption of pesticides and fertilizers and sales of farm implements to private farmers decreased in 1982.[28]

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[27] Rocznik Statystyczny 1983, p. 281.

[28] The regime also did not implement fully the state farm reforms in 1982. These reforms in theory gave state farms control over such major items as production, employment and investment. As in the non-agricultural economy, however, where a similar type of reform was implemented in January 1982, the government has been reluctant to give up its central controls. According to an article in Nowe Drogi, No. 4, April 1983, the government has restricted the state farm's freedom to sell its production and has continued to subsidize the farms. It also has hesitated to reorganize or disband unprofitable state farms—comprising about 25 percent of all state farms in 1981-82.

Despite these policies, agricultural output increased 5.0 percent from 1981 levels—compared to an average 4.7 percent annual growth in 1970–74 and stagnation during 1975–80.[29] Although the grain crop increased 7.6 percent, total crop output fell because of declines in the production of potatoes, sugar beets, and rapeseed—a source of vegetable oil. The fodder harvest also fell 17 percent compared with 1981 and contributed to lower livestock numbers by the end of the year.[30] The regime also was unable to procure planned amounts of grain in 1982 even though grain production increased. The shortfall in deliveries was 0.7 million tons in the period July 1981 to June 1982 and 2.6 million tons during July 1982 to June 1983. Many farmers apparently kept grain for feedstock because the state was unable to supply them with imported high protein feeds.

Distress slaughtering of poultry and livestock increased in 1982 because of a lack of feed. By the end of the year, total poultry stocks had fallen by 20 percent, cattle herds by 4 percent and hog numbers by 8 percent (including a 25 percent decrease in sows). Private farmers reduced their hog and sow holdings even more drastically—by 12 and 28 percent, respectively. Although meat supplies increased temporarily because of the slaughtering, overall per capita consumption of meat in 1982 decreased to 58.5 kilograms per capita, compared to 65.0 kilograms in 1981.

The regime wanted to boost imports of grain but could not completely make up the shortfall because of the lack of credits. In early 1982, Warsaw purchased more than 2 million tons of grain from France and Canada on credits agreed to before the imposition of martial law. The USSR also supplied about 500,000 tons of grain on credit. Most grain purchases in the West, however, had to be made for cash or barter mainly because of the Western credit restrictions imposed in response to martial law. As a result, grain imports decreased by one-third from July 1981 to June 1982 compared with the previous 12 months and by another 20 percent in the next 12 months.

As a result of the sharp decline in imports, the hard currency agricultural trade deficit fell by some $1.2 billion in 1982 to $630 million. Total hard currency agricultural imports declined by 49 percent while exports of foodstuffs and agricultural raw materials remained about at their 1981 level. Declining earnings from the export of meat and meat products were offset by increased earnings from the export of sugar, fruits, and vegetables, and selected dairy products.[31]

The regime tried to dampen consumption by increasing retail prices, especially of high quality foods, and by expanding the rationing program. Retail prices of foods increased by about 135 percent in 1982, including a 231 percent increase in the price of meat. Even with these large price increases, however, food subsidies still comprised a high percentage of the 1982 state budget. The rationing program was expanded to cover over 50 percent of food items sold in state markets. As a result of increased prices, reduced supplies, and rationing, food sales in state stores declined 14.3 percent in 1982.

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[29] L.W. International Financial Research, Inc., Agricultural Output, Expenses and Depreciation. Gross Product and Net Product, OP-56, 1979; OP-76, 1983; OP-81, 1984.

[30] Rocznik Statystyczny 1983, p. 265-266.

[31] Rocznik Statystyczny Handlu Zagranicznego 1983, pps. 7, 9, 45, 63.

1983.—The Polish regime maintained many of the same overall goals in 1983. The agricultural and food trade deficit again was reduced by cutting back further on imports of grain and feed. In line with this policy, the regime stimulated the production and sale of grain to the state by increasing procurement prices and encouraged a reduction in livestock herds—major consumers of grain. Meanwhile, the regime relaxed its consumer austerity program by holding back on price increases and letting incomes rise more than planned.

The regime again offered incentives to farmers to increase output and sell to the state. Warsaw passed a constitutional amendment "guaranteeing" the existence of private farms and offered them help in raising their agrotechnical level. The government increased the amount of agricultural inputs, allowed the purchase of more land by private farmers, and supplied additional fodder to farmers to raise contracted hogs. Warsaw also restored subsidies for breeding animals and growing high grade potato and grain seeds.

Largely because of good weather and these increased incentives, the regime had some success in increasing crop output. Grain production increased 4.4 percent, potatoes 7.9 percent and sugar beets 8.5 percent. The 29 percent hike in the procurement price of grain helped increase state purchases by 64 percent in 1983 compared to 1982. As a result, the regime was able to decrease its grain import needs slightly, from 3.5 million tons to 3.2 million tons in the period July 1983 to June 1984.

Livestock numbers in June 1983, however, were significantly lower than the previous year. The number of cattle decreased 5.4 percent while the hog population fell 20 percent, including a 24 percent decline in the number of privately owned hogs. Livestock numbers continued to fall to record lows in December 1983, and the meat industry estimated that output was about 14 percent less in 1983 than in 1982 and would be another 10 percent lower in 1984. The regime had increased procurement prices marginally (8 percent) but may have allowed livestock raising to become even more unprofitable for many private farms. According to the Polish press, the Ministry of Agriculture has acknowledged that it did not take into account higher national insurance premiums and increased fuel costs when calculating the new procurement prices.[32] A Polish research institute calculated, for example, that the cost of raising a hog in 1983 was 172 zloty per kilogram while the state paid only 126 zloty. The production cost for one kilogram of beef was 195 zloty but the procurement price was only 88 zloty.[33]

Farmers also complained in 1983 about poor supplies of consumer goods in the countryside. Farmer representatives told a government meeting in September, according to the Polish press, that both producers and distributors favor large urban areas because of lower transportation costs. They claimed, for example, that only 11 percent of total paint and varnish supplies were allocated to rural areas in 1983, and that supplies of many consumer goods, which increased in the urban centers compared to 1982, fell in the countryside. As a result, 50 percent of country stores reportedly were idle for lack of saleable goods.[34]

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[32] Glos Wybrzeza No. 157, July 6, 1983.
[33] Sztandar Mlodych, No. 226, November 16, 1983.

Poland decreased imports of food and agricultural products by over 20 percent in 1983 because the country continued to lack access to financing. The largest cuts were in imports of grain, meat, coffee, tea, oil meal and citrus fruits.[35] The USSR again supplied on credit about 500,000 tons of grain, but France and Canada failed to renew long term grain credit agreements that expired in late 1982. The United States, which had supplied more than half of Poland's grain imports in the late 1970s, maintained its prohibition on extending credits. Some short-term trade credits provided under the 1982 rescheduling agreement with Western banks were used for grain purchases, but the bulk of Poland's agricultural purchases were made for cash or through barter and countertrade.

Largely as a result of these cuts in imports, the hard currency agricultural trade deficit decreased by over $500 million to about $110 million in 1983. Export performance improved as sales of food and agricultural goods rose by 14 percent with large boosts in the export of powdered milk, processed agricultural products and sugar.

The regime did not take actions in 1983 to further stem consumer demand. Official prices of foods in state stores did not increase and rationing of some foods such as whole fat milk, flour and candy was discontinued. Retail price increases that were to follow the July 1983 increase in procurement prices were postponed until January 1984. As a result, the amount of food subsidies, which the government had pledged to hold down, increased in 1983.

Although some positive developments occurred in the consumer sector in 1983, the average consumer's situation probably was virtually unchanged from 1982. Retail sales of food in state markets in 1983 compared to 1982 increased about 3 percent.[36] Some food supplies, however, did not increase. Moreover, many consumers, especially pensioners, could not afford the high prices of foodstuffs because their incomes failed to rise as rapidly as other sectors of the populace.

V. OUTLOOK FOR AGRICULTURAL PRODUCTION AND TRADE

Polish plans calls for moderate increases in agricultural production by 1990:[37]

	1982	1985	1990
Grain (million metric tons)	21.2	23.0	24.6
Potatoes (million metric tons)	32.0	45.2	44.0
Sugar Beets (million metric tons)	15.1	16.5	17.0
Cattle (million)	11.9	12.5	14.5

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[34] Dziennik Ludowy October 5, 1983.

[35] Contemporary Poland No. 17, September 1983, vol. XVI, p. 7.

[36] Rocznik Statystyczny, 1984, p. 368.

[37] See "Prospects for Polish Agriculture in the 1980's," by Edward Cook in this volume for a more complete description of Polish agricultural plans for the 1980s.

	1982	1985	1990
Hogs (million)	19.5	20.5	23.0

Grain yields are expected to increase to 30 quintals per hectare in 1990 from a 24.7 quintal average in 1978–82. The regime again pledges to increase supplies of farm inputs, including fertilizers, pesticides, and farm implements; improve the rural infrastucture; and increase the farmers' standard of living to accomplish these goals.[38]

The regime also plans only modest improvements in the Polish diet over 1982 levels. Annual per capita food consumption is scheduled to increase to the following amounts:

	1980	1982	1985	1990
Meat and products (kilograms)	74	58	58	63
Milk (Liters)	262	255	275	285
Eggs (units)	223	200	222	225
Total fats (Kilograms)	24.8	21.6	23.4	25.1
Grain products (kilograms)	127	124	127	125
Vegetables (kilograms)	101	106	120	125
Fruits (kilograms)	38	41	45	50

Plans envisage only moderate increases in retail prices in the 1980s and minor cuts in budget subsidies for food.[39]

Poland probably can meet its production and consumption goals only if agriculture is given priority in investment, especially in the development of the infrastructure, and the private farmer is given additional assurances and incentives to increase production. Despite earlier promises, the regime has lowered the amount of investment to the agricultural sector from a proposed 30 percent of the budget to 28 percent split between the agricultural and food sectors in the 1983–85 period[40]—about the same percentage as in 1982. With overall investment slated to increase only by 5 percent in this period, real investment in agriculture will increase only slightly.

Warsaw also has yet to ensure the profitability of production for private farmers, equity between urban and rural living standards and a reasonable taxation policy for private farmers. Changes in farm tax policies proposed in 1983 and scheduled to take effect in January 1985 will be a heavy blow to some farmers. The measures—to be implemented over a 3-year period—include a new flat tax on land (based on soil quality and nearness to urban centers) and a tax on the income of highly profitable specialized agricultural enterprises such as greenhouses and poultry farms. The government says that the changes are intended to tax uniformly all sectors of agriculture and to create incentives for better land use.[41] The measures could disrupt agricultural production, however, especially in the short term. Higher taxes on successful, specialized agricultural operations could easily reduce incentives to boost output. Although the land tax could have the salutary effect of forcing marginal producers out of business and increasing the size of the average private farm, this is likely to result in reduced production in the short-term. Moreover, the measures may only increase anxieties of private farmers regarding government intentions. Many farmers probably interpret the tax as another government attack on them.

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[38] Trybuna Ludu, October 21, 1982, pp. 4, 5.
[39] Ibid.
[40] Warsaw PAP, 1427 GNP, 30 Sept. 1982.
[41] Dziennck Ludowy, October 13, 1983.

The agricultural trade balance can be improved only if, together with increases in production, consumer demand is controlled and exports are increased. The regime could control consumer demand by raising retail prices of food to reflect their true costs, restricting the growth of incomes, and keeping a tight lid on the imports of agricultural products. Warsaw, however, seems reluctant to take these steps for political reasons. For example, the original 1983–85 plan called for price increases of 25 to 30 percent annually but these were scaled down to 11 to 13 percent because of political pressure.[42] Incomes also are scheduled to increase more than originally planned.

Agricultural exports could be increased by investing in larger and better storage and processing facilities, developing better marketing techniques for selling to Western countries, and concentrating on the production of labor intensive and specialized commodities that can be produced in excess of domestic needs. The regime, however, has not given priority to investments that could lead to increased food and agricultural exports and has not improved marketing techniques to increase Western sales. Instead, food exports still seem to be considered a residual from the domestic market. For example, the regime decided to divert some meat—originally scheduled for export—to the domestic market in 1984 in order to maintain meat rations at the 1983 level.

In summary, the agricultural sector will remain an Achilles heel of the economy in the absence of major policy changes. Although the regime has provided some positive inducements, it seems both unwilling and unable to make the large-scale investments that seem necessary to address the problems of the sector. Poor agricultural performance will continue to hold back the growth of national income and—in the event of poor weather—could easily lead to futher declines. The agricultural trade balance has improved mainly by cutting imports, not by developing markets for goods, such as vegetables and meat which are saleable in the West. Perhaps most importantly, from a political standpoint, poor agricultural performance will limit the regime's ability to offer workers' incentives and to placate disgruntled consumers.

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[42] Summary of World Broadcasting, 25 November 1982, EE/W1213/A/7.

[43] Summary of World Broadcasting, 25 November 1982, EE/W1213/A/7.

PROSPECTS FOR POLISH AGRICULTURE IN THE 1980'S

By Edward Cook*

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I. SUMMARY

Since 1980 Polish agricultural production has fallen below levels of the previous decade. Food supplies have tightened and the quality of the diet has declined. Prospects for anything but a gradual and protracted recovery are dim. ERS projects that agricultural production will not fully recover its pre-crisis level until the late 1980's and that meat production alone will not fully recover until the first half of the 1990's. The outlook for improvement in the quality of the diet is even worse. This is because of the need to improve the balance of trade in agricultural commodities combined with continued growth in population.

The reasons for the agricultural decline are tied to developments in the economy as a whole and to agricultural policies of the seventies. Those policies were built around the notion that a program of state-fostered expansion of socialized agriculture could solve Poland's agricultural development problems. State and collective farms were allowed to operate in an increasingly lenient financial environment. Investment projects for socialized farms were decreed by the State and the resources for their implementation were guaranteed. Socialized agriculture was given priority access to purchases of land and other inputs.

Among private farmers, the State attempted to discriminate between farms considered to be commercially viable and those that were not. The latter were most often denied access to investment goods and land purchases. Furthermore, the network of private farmer cooperatives—the agricultural circle organizations—were fully integrated into the State administration and regional guidelines for the expansion of the share of land farmed by the socialized sector were drawn up.

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The impact of these policies was decidedly negative. The economic performance of socialized agriculture declined strongly as a result of the increasing degree of bureaucratic interference in farm management. Private farmers, meanwhile, were losing faith in their future place in Polish agriculture. As a result, an increasing number of farmers in the most productive age brackets left agriculture for jobs elsewhere, and the amount of long-term investment in private farms declined.

The State attempted to cover the weaknesses of domestic agricultural policy by steadily increasing the net imports of agricultural commodities. When the economic crisis arrived, therefore, agriculture was in a particularly vulnerable position. Investment during the seventies, being ill-coordinated and skewed too heavily in favor of socialized agriculture, had failed to provide a healthy basis for dealing with the coming economic contraction.

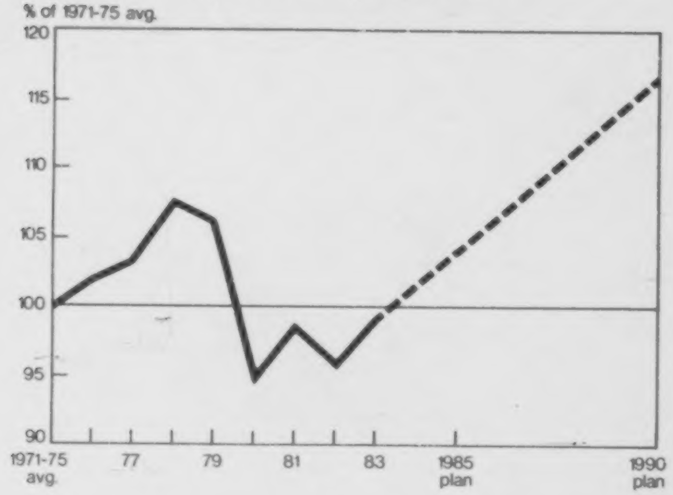
In 1980 agricultural production declined 11 percent and has since remained below the average of 1971-79. Both agricultural incomes and investment levels have also fallen off since 1980. Between 1980 and 1983 agricultural imports were cut by more than half in an effort to balance agricultural trade. The long lines for food which were common in 1981-82 were in part the result of a sudden drop in food supplies, but more than this were a result of pricing and distribution shortcomings. Overall, food supplies remained adequate to meet the needs of the population. However, consumption of quality food items, particularly of meat, fell sharply and is much lower now than in the late 1970's.

The prospects for recovery of agricultural production are not bright. Investment in agriculture in the eighties will average well below that of 1977-80 and imports of intermediate agricultural products, such as grain and feed for livestock, will recover only slightly.

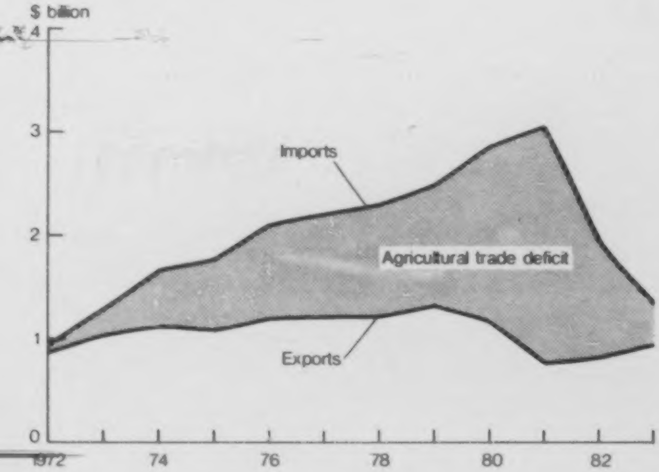
A number of reforms have been implemented to correct the errors in agricultural policy of the previous decade. Most notably, private farmers now have better access to investment goods and land purchases, and socialized farms are being made more accountable for their economic performance and allowed greater management autonomy. However, these reforms have come at an economically inopportune time. It's questionable if they will have a positive impact on production as long as agricultural living standards remain depressed. Furthermore, the reforms have failed to deal with a central problem of agricultural policies of the seventies—bureaucratic interference in local affairs—and have left private farmers still skeptical of the longer-term policy preferences of the State.

ERS projects recovery of agricultural production to its pre-crisis peak only by 1988-90. Given this and the goal of balancing agricultural trade by 1990, the chances for full recovery of meat consumption per capita are nil. Meat consumption peaked at 74 kilograms in 1980 (compared to roughly 110 kilograms in the United States) and has since fallen to 58 kilograms. Plan guidelines for 1990 give a target for per capita meat consumption of 63 kilograms. Even this modest goal will likely prove difficult to achieve.

Index of Gross Agricultural Production, Poland, 1976-83 Annual, and 1985 and 1990 Plan



Polish Agricultural Trade



II. AGRICULTURAL POLICIES

Poland's failure to successfully collectivize agriculture in the 1950's meant that private ownership continues to play a predominant role in its agricultural sector (table 1). This places Poland in a unique position among CMEA nations and seemingly contradicts Marxist-Leninist theory on agricultural organization in a socialist state.

TABLE 1.—AGRICULTURAL LAND BY FARM TYPE [1]; 1970, 1975, AND 1980

	1970	1975	1980
	Million hectares		
Total	19.5	19.2	18.9
Private	15.8	15.2	14.1
Socialized	3.7	4.0	4.8
Of which:			
State farms	3.0	3.3	3.7
Collective farms	0.2	0.3	0.8
Agricultural circle farms	0.1	0.2	0.3
	Percent of total		
Private	81	79	75
Socialized	19	21	25
Of which:			
State farms	15	17	20
Collective farms	1	2	4
Agricultural circle farms	1	1	1

[1] In terms of land utilization.

Source: Rocznik statystyczny 1981, p. 303.

Poland's fragmented land structure also poses a dilemma for policymakers. In 1980 the average farm in Poland, excluding minifarms of under 2 hectares, was only 6.3 hectares (1 hectare = 2.47 acres), up from 5.7 hectares in 1970, and in many cases consisted of a number of scattered holdings.[1] This has made the introduction of much conventional modern technology for crop and livestock production economically unfeasible. According to estimates of the Polish Institute of Agricultural Economics, roughly 15 hectares of land are required for a farmer to attain an income comparable to that of workers elsewhere in the economy. Throughout the 1970's only about 6 percent of Poland's private farms were 15 hectares or larger, while more than 40 percent were 5 hectares or less. This has meant that private farmers need to rely on non-agricultural income sources to a great extent to guarantee themselves an average standard of living. With such farm structure, construction of an effective price and incomes policy for agriculture has been extremely difficult. For those farmers with income primarily from non-agricultural sources, the Government has often expressed doubt that land utilization is as intense as it could be.

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[1] Rocznik statystyczny rolnictwo i gospodarki zywnosciowej, GUS, Warsaw, 1982, p. 86.

A. Experience of the Seventies

During the seventies, agricultural development policy in Poland was based on the notion that State-fostered expansion of socialized agriculture could successfully deal with the perceived economic and political problems. It was believed that the forced expansion of socialized agriculture would not harm the performance of private agriculture.[2] Socialized agriculture was given priority in the distribution of resources and in purchases of land from the State Land Fund, received increasingly large operational subsidies from the State, and often had its bank debt obligations forgiven.[3] The State took an active role in developing long-term guidelines for land socialization, and in making investment and other managerial decisions for individual socialized farms.[4]

Though certain actions favorable to private farmers were taken, particularly in the first years of the seventies when compulsory deliveries were abolished and prices paid to farmers increased significantly, their second-class status combined with a general disdain for small-scale agricultural production on the part of many policymakers, led to a deteriorating environment for private agricultural production.

This approach had a negative impact on agricultural performance. The growth of net final production in agriculture, measured in constant zlotys, slowed considerably throughout the seventies and actually declined in 1976–80 compared with 1971–75. Value added in agriculture, after increasing a bare 3 percent in 1971–75 relative to 1966–70, fell 12 percent in 1976–80 compared with 1971–75.[5] Though both sectors were affected, the economic performance of socialized agriculture was hindered more than that of private agriculture. The high costs of the State's strategy of bolstering socialized agriculture caused a serious decline in the financial health of that sector. By 1980 value added per hectare of agriculture land in socialized agriculture had declined to just 1,235 zlotys compared with 11,323 zlotys in private agriculture.[6] Though one would expect higher value added per hectare in private agriculture because of that sector's higher labor intensity, such a discrepancy is startling. Between 1971 and 1978 the losses of the state farms increased almost seven-fold to 28.3 billion zlotys (nearly $1 billion).[7]

The major harm done to private agriculture by the policies of the seventies was to reduce interest among young people in farming as a profession. Uncertainty about the long-term prospects for private farming, a less than average income from such work, and growing employment opportunities elsewhere in the economy, caused a four-fold increase in the outmigration from agriculture of labor in the 19–44 age bracket in the seventies compared with the sixties.[8] By 1980, the agriculture policies of the Gierek regime had become too costly to pursue further. As a result, the State was ready to listen to demands for policy changes voiced by farmers following the rise of Solidarity.

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[2] Wos, Augustyn, "Socjalistyczne przeobrazenia rolnictwa" in Procesy rozwojowe polskiego rolnictwa, PWRiL, Warsaw, 1979, p. 290.

[3] Andrzejewicz, Jerzy, "Zreformowany system ekonomiczno-finansowy PGR", Wies wspolczesna, No. 3–4, 1982, p. 85.

[4] Dabrowski, Przemyslaw, "Planowanie rozwoju rolnictwa w swietle badan nad przestrzenno-sektorowym zroznicowaniem produkcji rolniczej", Zagadnienia ekonomiki rolnej, No. 5, 1981, pp. 24–5.

[5] Using the Polish definition of "produkcja czysta", which is gross final production minus material costs. Rolnicza produkcja globalna, koncowa, towarowa i czysta w latach 1976–79, GUS, Warsaw, 1980 and Rocznik statystyczny, GUS, Warsaw, 1982.

[6] Ibid.

[7] Andrzejewicz, Jerzy, "Produkcyjne i finansowe wyniki PPGR", Wies wspolczesna, No. 10, 1980, p. 68.

B. Reforms in Agricultural Policies, 1980–81

In the wake of the formation of Solidarity, a number of private farmer groups began openly demanding a change in the agricultural policies of the seventies. Following a sit-in confrontation in the city of Rzeszow in February, 1981, the Polish Government agreed to an extensive list of agricultural reforms. These were meant to insure the permanent status of private agriculture and to place the private farmer on a more equal footing with socialized agriculture. The major points of agreement are listed below:

1. Guaranteeing the right of ownership and inheritance to private farmers and the permanent status of private agriculture in Poland.
2. Giving private farmers priority in purchasing land from the State Land Fund and simplifying legal limitations on land sales.
3. Equalizing terms of access to credit for all sectors of agriculture and increasing independence of banks lending to farmers.
4. Increasing supplies of machinery and spare parts for private farmers, entailing a shift in production from large to small machinery and an increased share of agricultural investment for the private sector.
5. Insuring profitability for farming and a living standard equal to that of urban workers through more favorable prices and an improved pension system for farmers.
6. Developing small-scale local industries and services for agriculture.

In each of these areas the Rzeszow agreement was a major break with the agricultural policies of the seventies and as a whole a significant gain for the private farmer.

Conspicuously absent from the Rzeszow document was any discussion of private farmer organizations. The State hoped to revitalize the system of agricultural circles—the traditional cooperative organizations of private farmers in Poland.[9] They had become highly compromised in the eyes of farmers during the seventies when their management became completely integrated into the State administration and increasingly disinterested in the needs and aspirations of member farmers. Following a bitter and protracted sit-in by private farmers in the city of Bydgoszcz in March and April of 1981, the State was forced to officially recognize the existence of Private Farmers' Solidarity (Rural Solidarity). On May 12, 1981, this organization and the agricultural circles were both registered as trade union organizations for private farmers.[10]

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[8] Frenkel, Izaslaw, "Zmiany zatrudnienia w rolnictwie polskim (II)", Wies wspolczesna, No. 11, 1981.

[9] "Stanowisko Biura Politycznego KC PZPR i Prezydium NK ZSL w sprawie wezlowych problemow polityki rolnej, rolnictwa i gospodarki zywnosciowej", Zolnierz wolnosci, October 20, 1980.

[10] "NSZZ RI Solidarnosc i CZKiOR zarejestrowane", Trybuna ludu, May 13, 1981.

Another important area of agricultural reform concerned the socialized farms. Soon after the removal of Edward Gierek from power in September 1980, a reform for socialized agriculture was drafted.[11] Most operational subsidies paid from the state budget were to be eliminated and the management and financial autonomy of socialized farms was to be greatly expanded. Credit policies, which had been quite lenient for state and collective farms during the seventies, were to be tightened up considerably. In part to cushion the shock of this new financial self-reliance, major farm price increases for agricultural commodities were enacted in April and July of 1981.

The major economic contraction and the resulting decline in the amount of real resources available cast a dark cloud over the reforms from their inception. Farmer aspirations for an improved standard of living inherent in the Rzeszow Agreement seemed to have very slim chance of being realized by late 1981. A noted agricultural economist in Poland summed up the situation this way:

> Industry and other non-agricultural branches of the economy will not be in a state in the next few years—realistically speaking—to seriously increase the sale to agriculture of production means. . . . The insufficient supply of industrial production means, and also of consumer goods destined for the rural market, has had a braking effect on the process of increasing agricultural production not only in a technological sense, but also . . . in a motivational sense.[12]

Politically, there was major disagreement over the shape of self-government in the countryside. The State was extremely reluctant to grant legal status to Private Farmers' Solidarity and unwilling to surrender bureaucratic control over local affairs. Despite the call to greater economic efficiency, the State remained politically committed to preserving the socialized sector more or less intact. Such a commitment meant the continued privileged treatment of this sector, though not to the extent characteristic of the seventies.

C. Prospects for the Agricultural Reforms

Despite the economic and political constraints, implementation of many of the agricultural reforms has continued since the declaration of martial law. Though the last few years have brought more equal operating conditions for private farmers relative to socialized agriculture and better financial performance of socialized agriculture, doubts clearly remain about the longer term policy preferences of the State.

In July 1983 the long-awaited constitutional amendment concerning the status of private farming was finally adopted. Though it provides guarantees to farm owners, it leaves in doubt the long-term prospects for private agriculture as a whole. It states that the Polish People's Republic:

> Protects private family farms of working peasants, guarantees the permanence of such farms, gives them assistance in increasing production and raising the agrotechnical level of production, supports the development of agricultural self-management, particularly the agricultural circles and cooperatives, supports the develop-

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[11] "Uprawnienia terenowych wladz i wieksza samodzielnosc PGR", Trybuna ludu, November 27, 1980.

[12] Zegar, Jozef St., "O wykorzystanie potencjalu produkcyjnego w rolnictwie", Wies wspolczesna, No. 12, 1981.

ment of cooperation and production specialization, and broadens the ties between private farms and the socialist economy."[13]

What is missing from the farmer's point of view is wording to the effect that private agriculture is a permanent element of the Polish economy, enjoying equal rights and treatment with state and collective farms. The problem was addressed in a recent Polish article:

> A major reason for the continued atmosphere of uncertainty is the fact that to this point the official goals of agricultural policy have not been modified . . . the main task of agricultural policy should be the continuous increase in the production capability of agriculture . . . And therefore, the socialist transformation of agriculture should be treated not as a goal, but as a means of agricultural policy. In these matters there has not as yet been a clear and unambiguous stance. An open and full re-evaluation of structural policy is an absolute necessity. Only in this way will it be possible to make it authentic. If this is not done, the conviction will remain in the minds of farmers that everything which has been done in the area of structural policy has been forced and is not permanent, and therefore does not offer favorable prospects for private farming.[14]

A possible reason for the delay in adopting an amendment and its eventual vague wording could be opposition to clear-cut guarantees for private agriculture from within the Polish United Workers' Party (PUWP) hierarchy. Evidence of such opposition was provided by Konrad Bajan of the Agricultural Section of the PUWP's Higher School of Social Sciences. Writing in the PUWP monthly Nowe drogi, he stated that:

> It will be necessary to tolerate for a certain period of time the existence of private agriculture supporting with all its might socialized agriculture . . . the concentration of land and production through the development of socialist forms of agriculture should in no case be slowed down.[15]

On October 8, 1982, a law was passed establishing the agricultural circles as the primary 'social-trade organization' of farmers, in the process Private Farmers' Solidarity was outlawed.[16] During its brief legal existence, Private Farmers' Solidarity had difficulty maintaining unity among its regional branches and there were serious differences over strategy and purpose within the farmers' movement.[17]

The new law on agricultural circles provides guidelines allowing for greater local control over the functioning of these organizations and less direct domination of the regional and national hierarchies by the State. The Director of the National Union of Agricultural Circles, Norbert Aleksiewicz, strongly defended the interests of farmers when he spoke at the January 1983 joint plenum of the PUWP and the United Peasant Party (UPP).[18] However, as in the past, the agricultural circles and the other farmer cooperatives are not independent organizations of farmers, but remain in reality extensions of the state administration. They are provided little recourse in conflicts with other organizations. Without the good will and full support of the State, the laws reforming private farmers' organizations will have little chance of actually improving the performance of these organizations in meeting the needs and interest of farmers.

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[13] "Ustawa o zmianie Konstytucji Polskiej Rzeczpospolitej Ludowej", Trybuna ludu, July 23-24, 1983, p. 3.

[14] Farkowski, Czeslaw, "Polityka wobec rolnictwa indywidualnego", Wies wspolczesna, No. 6, 1983, p. 36.

[15] Bajan, Konrad, "Rolnictwo a kryzysy spoleczno-polityczne w Polsce", Nowe drogi, No. 1-2, 1982, p. 178.

[16] For an English language copy of this law see; FBIS daily Report: Eastern Europe, October 28, 1982 "Law on Farmers' Organizations Published", p. G19.

[17] "We Favor Dialogue with the Government," Gazeta krakowska, October 28, 1981 translated in FBIS Daily Report: Eastern Europe, November 5, 9181, "Private Farmers' Solidarity Leader Jan Kulaj Interview", p. G25.

[18] Aleksiewicz, Norbert, "Dyskusja plenarna", Wies wspolczesna, No. 4, 1983, pp. 140-4.

The prospects for rural self-management are further clouded for the next few years by the dismal economic situation. It is unlikely that the State will allow the viewpoints of farmers to interfere with its management of the economic crisis. Many local government administrators have seized on the emergency economic programs for agriculture introduced under martial law as a basis for countering the reform movement, which threatens to deprive them of the authority they enjoyed in the 1970's.[19]

In accordance with the Rzeszow agreement, the forced expansion of the socialized sector has been halted and private farmers have finally been given fair access to lands in the State Land Fund. In 1981 and 1982 (the latest years for which data are available), the share of land in the private sector actually showed a modest increase. The increased sales of land to private farmers have brought with them a modest increase in the size of the average farm. Between 1978 and 1982, the size of the average private farm excluding the mini-farms of less than two hectares, increased from 6.2 to 6.6 hectares. The recent burst in sales from the State Land Fund is not expected to be maintained during the next few years, as the best situated and highest quality lands have been sold and less land is now coming into the Fund. Without increased private sales among farmers, slower improvement in the land structure is likely. A law simplifying the terms of such private transactions came into effect in the fall of 1982, but it remains too early to assess its impact.[20]

The longer term development plan calls for roughly a doubling in the number of farms over 10 hectares in size and increases in the number of mini-farms of under 2 hectares. The aim of this approach is to have farmers currently in the 2–10 hectare range commit themselves either to full-time agriculture or agriculture as a secondary source of income. It is questionable whether current policies will be sufficient to achieve these goals even over the course of a number of decades. In the shorter term, expansion of farm size may be constrained by a lack of inputs. Currently, per hectare production is higher on the smaller farms. Until sufficient capital is available to increase per hectare production of larger farms, development of such farms would actually tend to retard recovery of agricultural production.

In addition to improved access to land purchases, private farmers have received a much larger share of investment in agriculture, particularly since 1980 (table 2). Considering that most investment in the agricultural circles and a portion of that in the agricultural service organizations is directed toward augmenting services to private farmers, the investment shares in the last two years have been approaching the relative share of land farmed by the respective farm types. Similarly, private farmers' share of machinery deliveries has shown noticeable improvement. In 1982 alone, the share of agricultural machinery and equipment deliveries devoted to the private sector increased to 62 percent from 47 percent in 1981.[21] Also, the share of fertilizer going to private farmers has increased, though use per hectare of land in the private sector remains only about 60 percent of that in the socialized sector.

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[19] Szymanski, Wladyslaw, "Idee reformy gospodarczej i jej zagrozenia", Wies wspolczesna, No. 6, 1982, pp. 19–20.

[20] Szemberg, Anna, "Gospodarka ziemia a struktura agrarna", Wies wspolczesna, No. 9, 1983.

TABLE 2.—SHARE OF INVESTMENT IN AGRICULTURE BY FARM TYPE; 1978–82 ANNUAL [1]

	1978	1979	1980	1981	1982
Private farms	31.2	32.1	36.5	48.0	59.2
State farms	34.7	34.8	33.8	25.6	20.2
Collective farms [2]	13.5	14.4	12.4	10.6	5.7
Agricultural circles [3]	15.0	13.1	11.6	9.1	6.0
Agricultural service organizations	5.5	5.6	5.7	6.8	9.1

[1] Does not include investment in land improvement, electrification, and veterinary services.

[2] Includes investment in on-farm processing plants.

[3] Includes investment for both farming and service operations.

Source: Rocznik statystyczny, 1983, p. 294, and 1980, p. 257.

The reform of socialized agriculture, which was introduced on state farms on July 1, 1981 and extended to collective farms and the agricultural circle cooperatives on January 1, 1982, has resulted in generally improved financial performance. State farms, after running up a 22-billion zloty deficit in the 1980/81 fiscal year, registered a 28-billion zloty profit in 1981/82, the first year under the reform.[22] Increased decision-making autonomy at the farm level is one of the key features of the reform of socialized agriculture. Farm managers took advantage of this increased authority by reducing unprofitable livestock production—particularly of beef cattle—and improving the crop sowing pattern.

Some serious problems, however, continue to surround the reform of socialized agriculture. Socialized farming enterprises now face the prospect of taking financial responsibility for poor investment decisions that were forced upon them in the seventies under the directive-subsidy system of management. A prime example is livestock housing, a good portion of which has no prospect of being profitably utilized in the next few years. Evidence suggests that the State has bolstered the financial performance of socialized agriculture by not fully enforcing the principle of financial autonomy. For instance, the decline in budgetary subsidies to state farms in 1981/82 was just 8.7 billion zlotys,[23] much less than that stipulated in the state farm reform.[24] Furthermore, banks have continued the practice of debt forgiveness:

> Taking into consideration . . . the unfavorable situation of a certain portion of socialized agricultural enterprises, the banks undertook a number of decisions tem-

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[21] Szalajda, Zbigniew, "Zadania przemyslu w rozwoju rolnictwa i przetworstwa rolno-spozywczego", Wies wspolczesna, No. 4, 1983, p. 30.

[22] "PGR-y zwiekszaja produkcje", Trybuna ludu, September 9, 1982.

[23] Bala, Jozef, and Wisniewski, Leszek, "Reforma gospodarcza a zarzadzanie w PGR", Wies wspolczesna, No. 8, 1983.

[24] Andrzejewicz, Jerzy, "Zreformowany system ekonomiczno-finansowy PGR", Wies wspolczesna, No. 3–4, 1982, p. 89.

porarily easing their difficult financial situation, introducing the most accommodating conditions for the remission of investment credit.[25]

During the first year of the reform of socialized agriculture, there was no measurable improvement in labor productivity on state farms. Without improvement in this indicator, it is hard to imagine the eventual attainment of full financial health by these farms. Thus far the reform has not effectively linked worker remuneration with performance, nor has the process of nominating and recalling farm managers succeeded in eliminating poorly qualified management personnel.[26] Even given the improved financial performance of state farms in 1981/82, fully 25 percent of them continued to operate at a loss. It is highly unlikely that these farms will be allowed to fail. Rather, they are likely to be assimilated by more profitable neighboring farms or allowed to remain dependent on subsidization, both of which would blunt the incentive effect of the reform. Without solutions to the problems noted above, socialized agriculture will remain incapable of competing equally with private agriculture, which in turn will require continued preferential treatment for state and collective farms.

The economic crisis has also made it impossible for the State to meet farmer expectations of an improved living standard inherent in parts of the Rzeszow agreement. The State did increase average farmer income in 1981 through increasing prices paid to farmers by roughly 60 percent while holding down prices for inputs and services. This brought farmer income into rough parity with average non-farmer income for the first time in post-war Poland. The State failed to provide, however, sufficient quantities of either producer or consumer goods to the countryside to guarantee market equilibruim. Because of this, the higher procurement prices paid to farmers provided little incentive for higher production or sales of agricultural commodities to the State, but rather led to growing disruption of rural markets.

Since the imposition of martial law, farmers' real income has declined drastically, as prices farmers pay for inputs have increased more rapidly than prices they receive for their commodities.[27] In 1982, farmers real income declined about 23 percent,[28] that is, more than for industrial workers. Attempts to determine the level of income parity between farmers and workers elsewhere in the economy are wrought with methodological difficulties. Statistics now available indicate that farmers are alternately better or worse off than their non-farm counterparts. However, estimates of the Institute of Agricultural Economics and Food Economy and one recently given by the Deputy Director of the Planning Commission, place average farmer income once again below that of non-farmers.[29]

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[25] Jacek, Julian, "Spoldzielczosc bankowa w reformie gospodarczej", Wies wspolczesna, No. 8, 1983.

[26] Bala, Jozef, and Wisniewski, Leszek, op. cit.

[27] Sadowy, Eugeniusz, "Zmiany cen rolnych", Wies wspolczesna, No. 3-4, 1982, pp. 75-6.

[28] Estimated based on information in "Kommunikat Glownego Urzedu Statystycznego o sytuacji spoleczno-gospodarczej kraju w 1982", supplement to Biuletyn statystyczny, No. 1, 1983.

[29] "Warianty koncepcji planu 3-letniego a gospodarka zywnosciowa", Wies wspolczesna, No. 10, 1982, p. 12, and "Wszyscy patrzymy w strone wsi", Zycie gospodarcze, No. 24, June 12, 1983.

On January 1, 1983, a new law on private farmer pensions was adopted which allows for larger average benefits and opens eligibility for the first time to the spouses and in certain cases, children, of farmers.[30]

The new law allows for the basic farmer pension to gradually rise to the minimum for industrial workers by 1986.[31] The basic pension rate is adjusted upward depending on the value of commodities the farmer has sold to the State. Most of the increase in benefits and coverage over the old pension system is to be financed by farmer contributions to the Farmers' Social Insurance Fund.

A new agricultural tax law will be introduced in steps between 1984 and 1986. The current tax system is generally regarded by Polish agricultural economists as out-dated and ineffective in stimulating efficient use of land.[32] The new law will probably mean sizeable increases in tax payments, which will be yet another factor holding down farmer income in the next few years. The rationale behind the tax reform is that the new higher rates will force inefficient farms out of production, with this land eventually being assimilated by more efficient producers. Such a process would likely take a few years and could have a negative impact on agricultural production during this time. A possible longer-term problem is that the new agricultural tax system may actually be used primarily for smoothing out income differences among farms rather than stimulating more efficient use of land.[33]

The prospects for farmer income, ruling out an unforeseen burst in productivity, are not bright. The State is more or less committed to limiting further growth in subsidies to the agro-food complex while at the same time retail food price increases remain highly unpopular. If the urban workforce continues to win wage raises in excess of planned guidelines, as happend in 1983,[34] some of this excessive inflationary pressure may be relieved by further reducing the relative income of private farmers.

III. INVESTMENT AND INPUTS

Agriculture and the food economy have been designated as priority areas for investment in the eighties. Their share of total investment is planned to reach 30 percent by 1985 and maintain this level through the rest of the decade. In comparision, their actual share of investment during 1976–80 was 21.8 percent.[35] The decline in total investment between 1978 and 1982 has been so drastic, however, that despite the food economy's higher share, actual investment in the food complex in 1981–85 is officially expected to total just 80 percent of the account achieved in 1976–80.[36] Average annual investment in agriculture alone in 1981–82 was only 70 percent of the 1976–80 average level.[37] This points up the seriousness of the resource constraints facing Polish planners as they attempt to revive agricultural production. Furthermore, preliminary plan guidelines for 1986–90 indicate only a modest recovery in anticipated investment in the food economy in the latter half of the decade.

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[30] "Ubezpieczenie spoleczne rolnikow indywidualnych", Trybuna ludu, December 21, 1982.

[31] Martyniuk, Zbigniew, "Realizacja celow systemu emerytalnego rolnikow", Wies wspolczesna, No. 5, 1983.

[32] Krawczykowska, Monika, "W sprawie zasad opodatkowania gospodarstw indywidualnich", Wies wspolczesna, No. 9, 1981; and Pomorska, Alicja, "O potrzebie zmian w polityce finansowej wobec gospodarstw indywidualnych", Wies wspolczesna, No. 10, 1981.

[33] Blazejczyk, Marian and Pietrewicz, Miroslaw, "Spoleczno-gospodarcze i prawno-ustrojowe aspekty reformy opodatkowania rolnictwa", Wies wspolczesna, No. 10, 1983.

[34] "Wszyscy patrzymy w strone wsi", Zycie gospodarcze, No. 24, June 12, 1983.

[35] Rocznik statystyczny, 1981, p. 184, 1979, p. 117, 1977, p. 104; and Rocznik statystyczny rolnictwa i gospodarki zwnosciowej, 1982, p. 112.

[36] "Podstawowe zalozenia programu rozwoju rolnictwa i gospodarki zywnosciowej", Trybuna ludu, October 21, 1982.

Investment in agriculture alone, which accounts for 70–75 percent of investment in the food complex, therefore, is likely to be well below record levels in real terms for the rest of the eighties. Some savings can be realized in investment in livestock housing during the next few years, due to large unutilized capacity in both the private and socialized sectors. Also, the reform of socialized agriculture should allow state and collective farms to reduce their investment needs in the eighties. However, serious investment constraints are anticipated in areas such as land improvement, agricultural chemicals, infrastructure improvement, and small-scale machinery.

A. Agricultural Chemicals

Beginning in 1975, production of fertilizer in Poland stagnated and then declined between 1978 and 1980. Production since 1980 has not increased (table 3). Part of the reason for this lack of growth is the increased cost of fertilizer raw materials, particularly of phosphate ore, a portion of which must be imported from hard-currency sources. Probably more important is the technical condition of Poland's fertilizer industry and the lack of modernization or expansion work in recent years.[38] In the last ten years no new fertilizer factories have been constructed and the only project expected to be completed by 1990 is the Police II facility for production of mixed fertilizers.[39] Meanwhile, a number of nitrogen and phosphate factories are now in need of major capital overhaul to continue operation.[40]

TABLE 3.—FERTILIZER PRODUCTION, 1970, 1975, AND 1980–83 ANNUAL

[Million tons of active matter]

	1970	1975	1980	1981	1982	1983
Total	1.63	2.58	2.24	2.24	2.28	[1] 2.32
Of which:						
Nitrogen	1.03	1.53	1.24	1.27	1.30	1.34
Phosphate	0.60	0.93	0.84	0.87	0.87	0.87

[1] Estimated based on production of nitrogen and phosphate fertilizer in Biuletyn statystyczny, No. 1, 1984.

Sources: Rocznik statystyczny, 1983; and Biuletyn statystyczny, No. 1, 1984.

Fertilizer use per hectare of agricultural land is planned at 214 kilograms for the 1985 crop year, increasing to 230 kilograms by 1990. Such targets are well above the previous record of 193 kilograms achieved in 1980 and contrast markedly with the trend since the mid-seventies (table 4). Beyond the question of fertilizer supplies, there are doubts that farmers will find it profitable to purchase the planned amounts. In 1982 major retail prices were introduced in an effort to reduce state subsidy expenditures and for the first time in recent memory, fertilizer remained unsold in state outlets.

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[37] Rocznik statystyczny, 1983, p. 156, 1982, p. 143.

[38] "Czy chemia nadazy", Zycie gospodarcze, No. 7, 1982, March 7, 1982.

[39] "Czy chemia nie nadaza", Trybuna ludu, September 13, 1982.

[40] "How Much Mineral Fertilizer Will There Be?", Dziennik ludowy, February 18, 1983; translated in JPRS East Europe Report: Economic and Industrial Affairs.

TABLE 4.—USE OF AGRICULTURAL CHEMICALS, 1970, 1975, 1980–83 ANNUAL, AND 1985 AND 1990 PLANS

[Kilogram of active matter per hectare]

	1970	1975	1980	1981	1982	1983	1985 plan	1990 plan
Fertilizer [1]	123.6	181.9	192.9	186.2	178.4	169.7	214	230
Plant protection chemicals [2]	0.39	0.58	0.49	0.65	0.86	0.78	1.0	1.5–2

[1] Data are for split years, i.e. 1970 represents use in 1969/70.
[2] Estimated based on annual deliveries to agriculture.

Sources: Rocznik statystyczny, 1983; Trybuna ludu, February 3, 1984 and October 21, 1982.

It appears at this point that the targets for fertilizer use have been set unrealistically high. Without greater attention to the needs of this industry, Poland may be lucky to achieve 90 percent of the 1985 and 1990 targets.

Greater priority is being given to production of plant protection chemicals (PPC's) such as herbicides and pesticides. Though Poland's use of fertilizer per hectare remains close to the average for Eastern Europe, it ranks near the bottom for all of Europe in the use of plant protection chemicals. Production and use of such chemicals have long been underemphasized, but during the second half of the seventies, investment plans for PPC production were particularly underfulfilled, with virtually no projects completed.[41] The lack of attention to PPC use has probably seriously reduced fertilizer response rates in Poland. For instance, the lack of herbicides means that fertilizer use frequently contributes to weed growth and actually reduces crop yields.[42]

Beginning in the fall 1980 investment plans for PPC production were significantly expanded.[43] Many problems stand in the way of improving PPC supplies, though. In recent years 80 percent of PPC production has been based on the import of raw materials and ready preparations from the West.[44] Hard currency shortages are making continuation of this strategy very costly. Polish industry lacks the precision equipment required for production of many modern PPC's and there is a shortage of small container packaging for distribution to private farmers.[45] Finally, many private farmers lack the knowledge and experience to properly utilize many types of PPC's.

Production and use of PPC's have increased since 1980 thanks to greater reliance on older sulfur and copper based mixtures which can be produced from domestic raw materials. Attainment of plan targets in 1985 and 1990 would still leave Poland below average in Eastern Europe in PPC use.

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[41] "Rolnictwo liczy na chemie", Trybuna ludu, May 5, 1981.

[42] The Eastern Europe-USSR Branch of ERS estimates that Poland has had the lowest fertilizer response rate of any East European country.

[43] Trybuna ludu, May 5, 1981, op. cit.

[44] Zycie gospodarcze, March 7, 1982, op. cit.

[45] "Pestycydy sa czy ich brak", Zycie gospodarcze, No. 31, July 31, 1982.

B. Mechanization and Storage

Production and sales of agricultural machinery have generally received high priority since 1980. Despite the economic contraction, deliveries to farmers of many types of machinery have actually increased (Table 5). Tractor deliveries have increased slightly, but remain well short of annual requirements as well as the previous medium-term plan target for 1985 of 90,000 units.[46] One reason for failure to more dramatically increase tractor supplies has been the delays in implementing a licensing arrangement with Massey-Ferguson signed in the mid-seventies. Annual production of 50,000 to 75,000 of such tractors was planned for the early eighties, but has been steadily delayed first by poor coordination of support projects within Poland and then by a shortage of hard-currency for importing essential components. Meanwhile, official emphasis has shifted in part to the production of low-horsepower tractors most appropriate for use on private farms. Annual production of such tactors is planned to increase "eventually" to 35,000 units,[47] but there remains no evidence that any significant steps have been taken to implement these plans.

TABLE 5.—SALES OF TRACTORS AND MAIN TYPES OF MACHINERY TO AGRICULTURE, 1975, 1978, AND 1980–82 ANNUAL

[In thousands]

	1975	1978	1980	1981	1982
Tractors	42.0	58.5	59.9	59.4	60.5
Grain combines	2.8	4.0	4.5	4.2	4.4
Fertilizer spreaders	4.7	6.1	6.6	14.3	15.7
Grain sowers	1.4	8.5	13.4	13.9	15.7
Mowers	19.2	16.4	13.2	18.6	23.0
Threshers	13.6	10.9	11.8	10.5	11.0

Source: Rocznik statystyczny, 1983, p. 287

The continued lack of mechanization in Polish crop production is illustrated in table 6. As part of the medium-term plan for agriculture and the food economy, by 1990 the value of machinery in constant prices per hectare of agricultural land is planned to nearly double.[48] The actual increases are likely to be much more modest, however.

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[46] "Wytyczne Biura Politycznego KC PZPR i Presidium NK ZSL w sprawie wezlowych problemow polityki rolnej, rolnictwa i gospodarki zywnosciowej", Wies wspolczesna, No 4, 1981.

[47] Trybuna ludu, October 21, 1981, op. cit.

[48] Ibid.

TABLE 6.—SHARE OF SELECTED AGRICULTURAL TASKS PERFORMED BY TRACTORS AND OTHER SELF-PROPELLED MACHINERY, 1980

[In percent]

	All agriculture	Private farms
Plowing	62	50
Fertilizer application	43	25
PPC application	57	46
Grain sowing	38	16
Potato planting	31	28
Grain harvesting	45	25
Potato harvesting	10	7
Sugarbeet harvesting	20	9

Source: Wojcicki, Zdzislaw, "Problemy mechanizacji produkcji zboz", Nowe rolnictwo, No. 6, June 1982.

During the rest of this decade Polish agriculture will continue to be plagued by machinery-related problems that can only be moderately alleviated. For instance, nearly 50 percent of marketed agricultural production is still transported by horse, with most of the remainder transported by tractor.[49] This results in excessive wear and tear on tractors, which are higher cost means of transportation than trucks. The shortage of available trucks results in high losses of perishable goods, such as milk.

There still doesn't exist in Poland an effective network of machinery repair stations for private farmers. The existing network of agricultural machinery repair stations is geared almost exclusively to meeting the needs of socialized agriculture. As a result, in 1979 private farmers relied on state repair stations for only 9 percent of their machinery repairs, an additional 5 percent were performed by rural craftsmen working with fairly basic tools. The remaining 86 percent of repairs were performed by private farmers themselves.[50]

The perennial problem of inadequate spare parts supplies is likely to continue. Though there has been some indication of improved spare parts availabilities recently, the shortage of hard-currency for importing needed components from the West will keep supplies of certain items well below requirements.

Investment needs for expanding storage capacity are also large. The reduction of waste through expanded crop storage capacity is a main element in Polish strategy for improving food supplies through 1990. In 1980 the shortage of grain storage capacity was estimated by the Ministry of Agriculture at 4.3 million tons, or roughly 20 pecent of average annual production, and many existing structures were considered of poor quality.[51] Current waste rates average 10 percent for sugar beets and vegetables, 15 percent for potatoes and 30 percent for feed crops largely because of inadequate storage.[52]

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[49] Wojcicki, Zdzislaw, "Energia, paliwa, materialy i surowce dla rolnictwa", Mechanizacja rolnictwa, No. 1, April 1982.

[50] Stolarski, Zygmunt, "Gdzie naprawiac maszyny rolnicze?", Mechanizacja rolnictwa, No. 7, p. 4.

[51] Gasiorowska, Teresa, "Zbyt malo mamy magazynow zbozowych", Mechanizacja rolnictwa, No. 14, July 1981.

[52] "Rolnictwo i gospodarka zywnosciowa", Rada narodowa gospodarka i administracja, No. 1, February 1982.

C. Irrigation and Drainage

Though land improvement work—particularly drainage—has been given high priority among investments in official statements, actual work during the 1980's may not be sufficient to maintain total improved land area at its 1982 level of 6.3 million hectares (table 7). Estimated national requirements for improved land total 9.8 million hectares, 2.5 million hectares above current levels.[53] Many of the drainage systems currently considered as operational are in serious need of reconstruction and modernization. Annually about 120,000–150,000 hectares of such systems need to be renovated simply to maintain area with functioning drainage systems at their current level.[54]

TABLE 7.—IMPROVED LAND AREA, 1975, AND 1980–82 ANNUAL

[Million hectares]

	1975	1980	1981	1982
Total	6.0	6.3	6.3	6.3
Arable land	4.1	4.3	4.3	4.4
Of which drained	3.2	3.5	3.5	3.6
Meadows and pastures	1.9	2.0	1.9	1.9

Source: Rocznik statystyczny, 1983, p. 288.

Polish agricultural specialists have criticized the high investment priority for irrigation and drainage over the next few years because it could detract from more tangible progress in improving supplies of producer and consumer goods to farmers.[55] Apparently this point of view has won sway. The target for land improvement during 1983–85 has now been scaled down to a point where even if it were fulfilled, total improvement work during 1981–85 would fall short of renovation requirements alone.[56]

Land improvement work is and will continue to be plagued by problems coordinating projects given Poland's pattern of scattered land holdings in agriculture and delineating the specific responsibilities of the dozens of enterprises involved in land improvement work.[57]

D. Energy

Yet another factor that will restrain Polish agricultural production growth in the rest of the eighties is the shortage of available energy. Research at the Polish Institute of Construction, Mechanization and Electrification of Agriculture dating from before the economic crisis anticipated a 2.5–3.0 percent growth in energy expenditures for each one percent growth in gross agricultural production.[58] Total energy supplies were scheduled to increase 81 percent between 1980 and 1990. According to questionnaire data of the Polish Main Statistical Bureau, between 1974 and 1979 energy expenditures per farm increased 42 percent (table 8).

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[53] Kreft, Ryszard, "Melioracje uzytkow rolnych w latach siedemdziesiatych", Wies wspolczesna, No. 10, 1980.

[54] Trybuna ludu, October 21, 1982, op. cit.

[55] Zycie gospodarcze, October 10, 1982.

[56] "Melioracja: trudny start," Trybuna ludu, November 14, 1983.

[57] Kreft, Ryszard, op. cit.

[58] Wojcicki, Zdzislaw, "Problemy mechanizacji i produkcji zboz", Nowe rolnictwo, No. 6, 1982. This estimate includes energy "embodied" in inputs.

TABLE 8.—USE OF FUEL AND ELECTRICAL ENERGY ON PRIVATE FARMS, 1974 AND 1979

[Tons of standard fuel units per farm]

	1974	1979
Total	5.00	7.10
Solid fuel	4.16	5.87
Coal	3.51	3.56
Coke	0.39	0.62
Wood	0.24	1.66
Liquid fuel	0.58	0.87
Gasoline	0.22	0.32
Oil	0.36	0.55
Electricity	0.23	0.31
Natural gas	0.03	0.05

Source: Michalski, Krzystof, "Zuzycie paliw i energii w gospodarstwach indywidualnich", Wies wspolczesna, No. 11, 1981.

For the rest of the eighties no growth is planned in annual coal extraction from its current level of about 190 million tons. Likewise supplies of petroleum which were cut 20 percent as a result of hard-currency shortages, will remain tight. Increased availability of these energy sources for agriculture will likely depend on successful energy conservation measures elsewhere in the economy, or possibly in the case of coal, reduced exports. A positive factor is the possible increase in Soviet natural gas deliveries to Poland. This could result in an eventual increase of energy availabilities for agriculture. It is also unclear how much further growth in energy supplies can rely on wood, which accounted for a surprisingly large share of the increase between 1974 and 1979 cited above.

Much work is also required on investment in the electrical infrastructure if Polish agriculture is to be intensified. Currently, large portions of the Polish countryside have inadequate access to the electrical distribution system.[59]

IV. PROSPECTS FOR AGRICULTURE AND FOOD CONSUMPTION

In 1983 the Polish government ratified a program for economic recovery, focusing on 1983-85 and containing plan guidelines for 1990. This program provides the outline of the strategy for reversing the recent decline in the quality of the diet, while eliminating the negative balance of trade in agricultural commodities. Though the plan targets are more realistic than those of the past ten years, they will prove difficult to realize.

A. Production Prospects

The agricultural portion of this program contains production goals for both 1985 and 1990 and represents a major downward revision in official expectations from guidelines developed as recently as December 1981.[60] Agricultural production is not expected to reattain the pre-crisis peak it set in 1978 until 1985 or 1986. Meat production is expected to take even longer—until 1990 or 1991—to recover its previous record level.

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[59] Mechanizacia rolnictwa, No. 1, April 1982, op. cit.

[60] Struzek, Boleslaw, "Refleksje nad programem rozwoju rolnictwa i gospodarki zywnosciowej w latach 1981-85", Wies wspolczesna, No. 2, 1982.

Despite the relatively modest growth rates in the plan for many agricultural commodities, ERS projects an even slower recovery. Recovery of agricultural production is not considered likely until 1988–90 with recovery of meat production only by the first half of the 1990's The main reason for the pessimism is the anticipated continued shortage of resources both for agricultural investment and for import of intermediary agricultural products such as livestock feed. Investment plans will prove difficult to realize. Furthermore, many of those plans are probably inadequate for supporting officially anticipated agricultural production growth rates. An examination of recent policy developments in agriculture leaves little hope for significant improvement in the efficiency of Polish agricultural production.

Plan targets for major crops appear realistic. Some shortfall from plan is anticipated by ERS for grain production (table 9). A more significant shortfall is expected for oilseeds, which are used as raw material for vegetable oil production and also serve as a protein source in livestock feeds.

TABLE 9.—PRODUCTION OF MAJOR CROPS, 1976–80 AVERAGE, AND 1985 AND 1990 PLANS AND PROJECTIONS

[Million tons]

	1976–80 avg.	Plan—		Projection—	
		1985	1990	1985	1990
Grain	19.5	23.0	24.6	22.0	23.9
Potatoes	42.7	45.2	44.0	44.0	44.0
Sugarbeets	14.1	16.5	17.0	16.0	17.0
Oilseeds	0.6	0.9	1.0	0.7	0.8

Sources: Rocznik statystyczny, 1983; Trybuna ludu, October 21, 1982; and ERS/USDA Projections.

The plan targets for livestock, both in terms of inventories and meat production, appear out of line with the crop targets and beyond attainment (tables 10 and 11). By the end of the 1970's between 25 and 30 percent of Polish meat production was dependent on imported feed. With a severe import constraint and anticipated modest expansion of domestic feed production during the 1980's, feed supplies by 1990 are likely to remain below record levels. In the last few years livestock holdings on socialized farms have been reduced as a result of the new emphasis on profitability and the drastic cutback in feed imports. Without more favorable farm prices for meat and a successful conversion to more self-sufficient feeding practices, livestock production will be slow to recover on socialized farms. In the private sector, the opportunity for improved living standards may be essential to convince farmers to once again expand livestock inventories, particularly of hogs, to previous record levels. However, such opportunities are expected to remain slim for the rest of the decade. Recent farm price increases for hogs have stimulated interest in hog raising for on-farm consumption, but not for the market.[61]

TABLE 10.—JUNE LIVESTOCK INVENTORIES, 1980, 1983, AND 1985 AND 1990 PLANS AND PROJECTIONS

[Million head]

	1980	1983	Plan—		Projection—	
			1985	1990	1985	1990
Cattle	12.6	11.3	12.5	14.5	11.5	12.2
Of which cows	6.0	5.8	5.9	5.9	5.8	5.9
Hogs	21.3	15.6	20.5	23.0	17.5	21.5

Sources: Rocznik statystyczny, 1983; Trybuna ludu, October 21, 1982; Biuletyn statystyczny, November 7, 1983; and ERS/USDA Projections.

TABLE 11.—PRODUCTION OF MEAT, MILK, AND EGGS, 1980, 1982, AND 1985 AND 1990 PLANS AND PROJECTIONS

	1980	1982	Plan—		Projection—	
			1985	1990	1985	1990
Meat, million tons	4.4	3.6	4.0	4.5	3.6	4.15
Of which:						
Pork	2.2	1.9	2.2	2.5	2.0	2.3
Beef and veal	1.4	1.35	1.25	1.55	1.2	1.35
Poultry	0.6	0.25	0.3	0.3	0.25	0.3
Milk, billion liters	16.0	14.8	17.0	18.5	16.8	17.5
Eggs, billion	8.9	7.6	9.0	9.5	8.0	8.6

Sources: Rocznik statystyczny, 1983; Trybuna ludu, October 21, 1982; and ERS/USDA Projections.

Milk production is projected to be close to plan in 1985. In the latter half of the decade more emphasis is expected to be placed on reducing the very high losses in milk processing and handling than on further large increases in production. Though production is projected to grow slowly between 1985 and 1990, supplies of milk and milk products to the consumer should increase somewhat faster. Egg production is projected to remain below the record 1980 level because of continued limitations on feed imports.

B. Trade Prospects

The Polish agricultural trade deficit grew tremendously during the 1970's, increasing from $100 million in 1972 to $2.3 billion in 1981.[62] This trend reflected both the policy of improving the Polish diet despite below-plan growth in domestic production, and attempts to maintain living standards in the initial years of the economic crisis. In 1982 and 1983 the agricultural trade deficit was pared substantially, largely because of reduced imports.

The recovery program calls for balanced agricultural trade by the end of the 1980's. Consumption targets—particularly of meat—will likely have to be sacrificed to achieve this. Agricultural imports, at $1.3 billion in 1983, have probably been cut to the minimum allowable, given the State's intention to arrest further declines in the quality of the diet by 1985. Agricultural exports can be expected to generally continue the gradual uptrend of 1981–83 as a result of some increases in sugar, meat, fruit and vegetable exports.

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[61] "Czy musi byc mniej miesa?", Trybuna ludu, November 6–7, 1982.

[62] This definition of agricultural trade, in addition to including the Polish categories of trade in agricultural raw materials and food products, also includes trade in cotton which is placed under light industry in Polish foreign trade statistics.

Since 1981 the value of U.S. agricultural exports to Poland has fallen off sharply (table 12). During the latter half of the 1970's an increasing share of these exports were either financed by Commodity Credit Corporation (CCC) credit or covered by CCC credit guarantee programs. Following the imposition of martial law in December 1981, Polish eligibility for such programs was removed.

TABLE 12.—VOLUME AND VALUE OF U.S. AGRICULTURAL EXPORTS TO POLAND 1976–80 AVERAGE AND 1981–83 ANNUAL

	Volume (thousand tons)				Value (million hectares)			
	1976–80 average	1981	1982	1983	1976–80 average	1981	1982	1983
Grain	2,769	2,340	437	248	$330.5	$359.9	$45.3	$46.7
Of which:								
Corn	1,840	2,233	437	162	212.1	335.4	45.3	22.1
Wheat	617	92		74	83.1	17.0		19.2
Soybeans	134	87	100	193	35.6	25.3	22.4	48.7
Soybean meal	356	288	7	155	76.1	77.0	1.4	37.9
Other					76.3	134.2	112.7	72.2
Total					518.5	596.4	181.8	205.5

Source: "Eastern Europe World Agriculture Regional Supplement: Review of 1983 and Outlook for 1984," ERS/USDA, 1984.

Grain, soybeans, and soybean meal traditionally accounted for the majority of U.S. agricultural exports. ERS projection of Polish imports of grain, oilseeds and oilseed meal indicate little new market opportunity throughout the 1980's (table 13). Net imports of grain are expected to continue declining to 2.4 million tons in the 1985/86 July–June year. However, as recovery of meat production occurs during 1985–1990, they are projected to rebound to 3.4 million tons by 1990/91. Imports of oilseed meal (including oilseeds, all converted to soybean meal equivalent) should begin rebounding before 1985/86, but remain well short of the previous record. Oilseed meal is an important protein source for livestock feeds. Polish agricultural experts claim that imports of 2 million tons or more are required for efficient livestock production.[63] The balance of payments situation is expected to keep this goal from being met.

TABLE 13.—POLISH NET IMPORTS OF GRAIN, OILSEED MEAL AND OILSEEDS, 1980–81,[1] AND 1985/86 AND 1990/91 PROJECTIONS

[Thousand tons]

	1980–81	1985–86 projection	1990–91 projection
Grain	8,120	2,397	3,452
Oilseed meal	1,371	(2)	(2)

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[63] Hofman, Krzystof, and Michalski, Krzystof, "Podstawowe uwarunkowania i problemy rozwoju rolnictwa polskiego w latach osiemdziesiatych", Nowe rolnictwo, No. 8. 1981.

TABLE 13.—POLISH NET IMPORTS OF GRAIN, OILSEED MEAL AND OILSEEDS, 1980–81,[1] AND 1985/86 AND 1990/91 PROJECTIONS—Continued

[Thousand tons]

	1980–81	1985–86 projection	1990–91 projection
Oilseeds	165	([3])	([3])
SBME [2]	1,550	815	1,106

[1] All split years are July–June.
[2] Imports of oilseed meal, fishmeal and oilseeds all converted to soybean meal equivalent.
[3] No projections.

C. Consumption Prospects

The outlook for a return of meat consumption per capita to the levels of the late 1970's is extremely dim. This is so because of reduced feed imports, projected slow growth in domestic feed production, and the need to increase meat exports. On the demand side, much higher real prices of meat introduced since early 1982 and the likelihood of further increases, mean that Polish consumers cannot afford to purchase the levels of meat consumed in the late 1970's even if they were available.

Poland has traditionally enjoyed one of the highest caloric diets in the world.[64] Despite the marked decline in the quality of the diet between 1980 and 1982, consumption levels—particularly of carbohydrate foods—remained adequate to meet daily caloric requirements (table 14). Consumption of major protein foods such as meat, milk, eggs, and fish all declined, however. This, compounded by a poor distribution system, did lead to nutritional problems for a small segment of the population, primarily children of large, low-income urban families.[65] With appropriate price and income policies, domestic food supplies are adequate to meet the nutritional requirements of all Poles.[66]

TABLE 14.—PER CAPITA FOOD CONSUMPTION, 1980, 1982, AND 1985 AND 1990 PLANS

[Kilograms]

	1980	1982	1985		1990
			A	B	A
Meat and meat products	74	58.5	58	55.5	63
Milk and milk products, liters	262	247	275	268	285
Eggs, pieces	223	200	222	215	225
Fish	8.1	6.0	5.6	6.3	5.6
Fats and oils	24.8	21.5	23.4	22.9	25.1
Grain products (flour equivalent)	127	124	127	132	125
Sugar	41.4	41.7	39.8	NA	40.8
Potatoes	158	159	160	160	160
Fruit	37.7	42.8	45	39.8	50
Vegetables	101	107	120	118.6	125

NA=Not available.

Sources: Rocnik statystyczny, 1983; Trybuna ludu, October 21, 1982; and Wies wspolozesna, No. 5, 1983.

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[64] FAO Production Yearbook, Vol. 35, Food and Agriculture Organization of the U.N., Rome, 1982, p. 248.

[65] Gburczyk, Slawomir and others, "W kierunku zywnosciowej samowystarczalnosci", Zycie gospodarcze, No. 10, March 21, 1982.

[66] Ibid.

The strategy for improving protein supplies during the rest of the 1980's is to shift reliance away from meat and fish toward milk, peas, and beans. Targets for per capita consumption originally published in October 1982 (under heading A in table 14) were apparently revised downward in December 1982. However, revisions are available for 1985 goals only. The revised figures appear more realistic, but given ERS projections remain high for both milk and eggs. The unrevised 1990 targets are probably on the high side for meat, milk, eggs, and animal fats. It will prove difficult to reattain per capita meat consumtion of 60 kilograms by 1990, which would leave it some 20 percent below the record level of 74 kilograms.

In addition to problems increasing production of agricultural commodities, growth in food consumption will be retarded by weakened demand. In 1982 food prices increased an average of 136 percent while nominal income per capita increased by less than half of that—66 percent.[67] Despite declining levels of real food consumption, the share of disposable income devoted to food purchases increased, from 34 percent in 1981 to 47 percent in 1982 in worker-headed households.[68] Despite the major food prices increases of 1982 and further increases in early 1984, state budgetary subsidies to agriculture and the food economy remain large. If these subsidies are to be reduced in coming years, which has frequently been cited as official policy, then real prices for food may have to be increased further.

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[67] Rocznik statystyczny, 1983, pp. 100 and 368.

[68] This excludes expenditures for alcohol and tobacco. Rocznik statystyczny, 1983, p. 117 and 1982, p. 100.

ROMANIA

ROMANIA'S DEBT CRISIS: ITS CAUSES AND CONSEQUENCES

By Marvin R. Jackson*

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I. INTRODUCTION AND SUMMARY

Sometime in late 1981 with arrears of over $1b Romania became the second CMEA country after Poland to formally request rescheduling of its foreign debts in convertible currencies. Early in 1982 just about the time Romanian bankers announced their suspension of any service payments pending a rescheduling agreement, Hungary's National Bank found itself losing $1.1b of foreign-owned short-term deposits and in an intense liquidity crisis. But formal rescheduling of Hungarian debt was avoided with assistance of Western Banks, the IMF and possibly even some Soviet help.[1] Yugoslavia's turn came in early 1983, but again rescheduling was avoided by a "rescue package" of $1.3b pushed by the Reagan Administration and supported by Western commercial banks, the IMF and the World Bank.[2] In the meantime both Poland and Romania were negotiating another rescheduling of their 1983 debts.

As its title suggests, the paper discusses both the causes and the impacts of Romania's foreign debt crisis in 1981. Adequate assessment of the causes of Romania's crisis required a review of the country's performance leading up to 1981 which can benefit from newly released statistical information.[3] That assessment also requires some international perspective. In contrast to Poland, the other debtor required to reschedule, Romanian internal political order was not in peril. And its statistical indicators of foreign debt burden were less than the indicators for Hungary and Yugoslavia. Why were those countries favored by international bankers and not Romania?

The approach to these questions and their answers, when available, are summarized as follows:

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[1] "The Economist," October 23, 1982.

[2] "The Economist," January 22, 1983.

[3] A detailed discussion of Romania's condition up to the summer of 1981 is presented in Marvin R. Jackson and Josef C. Brada, "Romania: Crisis or Turning Point," Wharton Centrally Planned Economies Service, Special Report, Washington, D.C., 1981. This research was done without the benefit of detailed data on the Romanian economy circulated in two confidential reports by the Romanian Ministry of Finance as Romanian Economic Memorandum, May 1982 and Romanian Economic Memrandum, February 1983. This paper benefits from access to the memorandums and hindsight. A discussion of the contents of the memorandums may be found in the following "Centrally Planned Economies Current Analysis" edited by Jan Vanous and published by Wharton Econometric Forecasting Associates: July 16, July 23, July 28 and August 13, 1982, and March 29, April 1, April 4, 1983. Hereafter this source is referred to as Wharton CPE/CA.

A. Events leading to the crisis

(1) Romania's debt burden did not rise relative to other countries in Eastern Europe until 1980; even in 1982 its debts per capita and ratio of debts to exports in convertible currencies were not as high as in Hungary.

(2) Romania's internal disequilibrium developed in 1977 and 1978 as investments and import began to be more difficult to manage; it was preceded by exceptionally rapid growth of output and investments.

(3) Investment growth rates were reduced in 1979 and 1980, but still the real volume of investment flows in new fixed capital in 1980 were 50 percent higher than in 1975 and 160 percent higher than in 1970.

(4) The plan for 1981, formulated and approved in 1980, for the first time called for an absolute reduction of investment flows, while imports were planned to not grow; there were evidences of hesitation on the part of foreign creditors and Romanian payment delays by the end of 1980.

(5) In place of a planned trade surplus in 1981 Romania was running a trade deficit in convertible currencies in the first half of the year; by June, 1981, an IMF program provided immediate loans and standby credits and, in return, called for Romania to avoid arrears (which technically had already taken place) and reduce the current account deficit compared with 1980.

(6) International creditors did not support Romania following the IMF program; there resulted a large forced reduction of imports in convertible currencies before the end of 1981.

(7) Rescheduling the arrears from 1981 and obligations for 1982 took most of 1982, during which imports were forced down even more and exports in convertible currencies also diminished.

B. Causes of crisis

EXTERNAL DISTURBANCES

(1) Acts of nature in the form of an earthquake in March, 1977, and poor weather in 1980 and 1981 cost Romania current output, foreign exchange and complicated investment planning.

(2) Events in the international economy forced Romania to pay higher interest and to shift toward short-term debt, disturbed export markets in 1980 and 1981, and increased the cost of imported petroleum.

ECONOMIC SYSTEM TRAITS AND RESPONSES

(3) Romania's price mechanism, especially the connections of internal prices to international ones, encouraged over-consumption of energy materials and confused effective lines of importing and exporting (an example of which is the foreign exchange losses on foreign crude oil processed and exported in 1980 and 1981 (see Figure 3).

(4) The organization of foreign trade and its connections to domestic producers did not result in adequate adaptation to rapidly changing export markets.

(5) In the face of over-ambitious investing in industry, planners could not avoid an excessive build up of unfinished investments and other producer inventories, and of excessive imports of technical equipment and other capital goods.

POLICY AND POLITICAL PROBLEMS

(6) Romanian policy has placed too much stress on fixed capital investments generally and investments in industry particularly, without due regard to balance of payments constraints and worker incentives.

(7) A source of policy error is Romanian leadership which lacks means for open debate of policy issues and of sharing expert council; as anywhere else, its cult of personality has a high risk of "hairbrained" schemes.

(8) Possibilities of policy errors have been increased by the lack of relevant economic information (for example, foreign trade price indices), by excessive secrecy and by needless restrictions on contacts between Romanians and foreigners; these are possible byproducts of the leadership's apparent effort to promote xenophobia.

(9) A view of Romania over a longer period, from before the communist period, suggests the country tends to adopt lines of political economy which neglect balance of payment constraints on industrialization.

(10) Internal weaknesses have interacted with those in the international banking community; one gains the impression that the Romanians borrowed as much as was offered, thinking that the banks knew what they were doing and would not offer too much, and the banks lent as much as Romania took, subject only to its willingness to pay adequate interest for the ration of credit set for Eastern Europe, thinking that the Romanians knew what they were doing and would not take too much.

(11) At the point of crisis, the banks seem to have lost faith more easily and quickly in Romania than in neighboring Hungary and Yugoslavia; this probably was the cost of Romanian policies listed in points (7) and (8) above.

C. Consequences of the crisis

ON PRODUCTION AND RESOURCE ALLOCATIONS

(1) According to Romania's official indicators, the crisis was accompanied by a reduction of the growth rate to about 3 percent per year, 1980–1982, but never an absolute decline; western estimates of Romanian GDP show a small absolute reduction in 1981.

(2) The impact of large increases in net exports in 1981 and 1982, combined with slower growth of final output, caused absolute reductions in the real flow of total final products for domestic uses of 4 percent and 1 percent (see Figure 2 and Annex Table 3).

(3) Total gross investments in real terms (changes in inventories and fixed capital investments) declined in 1980, 1981 and 1982 with most of the reduction in 1981; by the same official statistics, total consumption declined absolutely only once, in 1982.

(4) Some of the initial impact of reduced investments was absorbed in reductions in the growth rate of inventory increases, but

inventories, including unfinished investment project, have never been reduced absolutely.

(5) Table 5 shows the distribution by broad sectors of the increase in net exports in 1981 and 1982: petroleum and petroleum products contributed about 25 percent each year. Machinery and equipment provided more than half in 1981 and nearly a third in 1982, and has clearly carried most of the readjustment; food made no contribution in 1981, but gave an important one in 1982.

(6) The real volume of imported machinery and equipment in Romanian investments might have been reduced to half the level in 1980 by 1982; in 1982 domestic production provided as much as 85 percent of investment supplies, but apparently not as much as was being demanded; a major question is what will be the longrun impact on Romanian technological development and the quality of exports.

(7) While energy supplies have constrained Romanian growth, the economy seems to have become increasingly more energy efficient (national production grows faster than energy consumption in official terms); a major immediate issue is the growth and quality of coal output; delayed nuclear capacity won't make a difference until after 1985.

(8) Net exports of consumer manufactured goods continue to make the largest absolute contribution to Romania's trade balance, but a somewhat smaller contribution than machinery to trade balances with non-socialist countries; the concern with this category is probably more the access to export markets than with the ability to supply the domestic economy (that ability is now more an issue of quality than it is quantity).

(9) Cash balances in the hands of Romanian households grew rapidly in the 1970s raising the question their becoming excessive enough to reduce labor incentives; in 1982 rising prices and reduced money income growth sharply slowed the growth of money balances; Romania's consumers spend, by CMEA comparisons, especially large shares on food products; hence, the role of agriculture in these balances is all the more important.

(10) Agriculture did poorly in 1980, 1981 and 1983; this record and the crisis may have provoked a new, higher priority on the sector in Romanian development plans, but it has not yet paid off and may not for many years.

ON ECONOMIC ORGANIZATION

(11) Both an organizational step toward the formation of a kind of agro-industrial complex and the announcement of a program for a "new economic and financial mechanism" were taken before the crisis.

(12) The crisis seems to have taken attention away from either organizational development, evoked more centralization, and possibly created instability of finance and prices detrimental to decentralization; there is a question of whether Romanian leaders ever wanted decentralization; probably they didn't.

II. A Review of Economic Performance Since 1975

Before tackling the causes of Romania's debt crisis the scene may be set by discussing the country's general economic performance since about 1975.

Comparison across countries is again the keynote in Table 1 in which are set out three common quantitative indicators of foreign-debt burden. In their terms two points stand out about Romania. First, a serious deterioration of its indicators was quite recent, only in 1980.[4] In fact, in the mid-1970s Romania's debt service ratio improved. Second, even in 1980 the comparative position of Romania was not so bad. Its debt service ratio remained second only to Czechoslovakia's and better than either neighbor, Hungary or Bulgaria. Debts per capita in 1981 were a third less in Romania than in Hungary, the GDR and Yugoslavia.

Its ratio of convertible currency debts to convertible currency exports were also lower than those three countries.

TABLE 1.—COMPARATIVE BURDENS OF FOREIGN DEBTS IN CONVERTIBLE CURRENCIES IN EASTERN EUROPE, 1975 TO 1981

	1975	1980	1981
Debt service ratio:[1]			
Romania	21	30	35
Bulgaria	44	32	23
Czechoslovakia	11	23	26
G.D.R.	24	36	44
Hungary	20	38	45
Poland	32	106	102
Yugoslavia	19	20	25
Ratio of debt to exports:[2]			
Romania	107	138	132
Bulgaria	224	83	69
Czechoslovakia	50	75	79
G.D.R.	177	220	246
Hungary	131	166	193
Poland	187	297	416
Yugoslavia	265	347	305
Debt per capita (US Dollars):[3]			
Romania	146	423	453
Bulgaria	241	282	247
Czechoslovakia	81	230	222
G.D.R.	285	693	765
Hungary	218	616	672
Poland	226	627	629
Yugoslavia	267	752	776

[1] The ratio of interest plus debt repayments to the sum of non-socialist merchandise exports and the net balance in invisibles.

[2] Net debt to hard-currency non-socialist exports.

[3] Net debts and mid-year populations.

Sources: Jan Vanous, "East European and Soviet Hard-Currency Trade and Debt in 1981" "Centrally Planned Economies Current Analysis" (April 27, 1982. Wharton Economic Forecasting Associates, "Centrally Planned Economies Outlook, "September 1983 (Washington, D.C., 1983). p. 15.

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[4] Because of this and the relatively poor quality and delays of foreign trade data for Romania even in early 1980 one could not see Romania heading for a balance of payments crisis. There was predicted a slowing of growth from a balance of payment constraint arising out of poor agricultural performance and decreased labor reserves. See Marvin R. Jackson, "Romania's Economy At the End of the 1970's: Turning the Corner on Intensive Development," in "East European Economic Assessment," Part 1—"Country Studies, 1980," a compendium of papers submitted to the Joint Economic Committee, Congress of the United States (Washington, D.C., 1981), pp. 231–298. This publication is referred to hereafter as "Economic Assessment."

Clearly if these simple quantitative ratios told the whole story about debt burdens and credit risks then something would seem wrong. Why didn't Poland collapse in 1976? Why were Bulgaria in 1976 and the GDR in 1977 not rescheduling? And how did Hungary escape in 1981, if not earlier? Of course, more was involved, as suggested by some evidence presented three years ago by Gabriel Eichler. The Institutional Investor asked 101 commercial banks to rank countries in terms of their assumed creditworthiness in September, 1979, and March, 1980. Romania was ranked better than Poland at both dates, but no better than Yugoslavia with its heavier burdens of debt. Romania's position relative to other countries slipped from one date to the other, but this did not happen to Hungary and Czechoslovakia who were ranked together and better than Romania. The GDR also ranked better than Romania. Bulgaria, not listed by Eichler, was ranked barely higher.[5] The search for what might have set Romania off from the others can begin about 1977 when Romania's "disequilibrium" first appeared.

A. Getting Into a Crisis, 1976 to 1980

One mark that set both Romania and Poland off from the other CMEA countries in the early 1970's was their uncommonly high overall growth rates. Still, Romania with an apparently higher growth rate had much lower debt burdens. Also, Romania's growth of about 8 percent in each year, 1977 and 1978, was considerably below the over 11 percent average it reported from 1971 to 1976.[6] These years, 1977 and 1978, were when the "disequilibrium" began, as shown in Figure 1. In both years Romania's convertible-currency exports in current prices grew only slightly faster than domestic output in constant prices. Possibly domestic output was being diverted from exports. At the same time imports in convertible currencies shot up in both years, by 14 and 22 percent. Their growth corresponds not only with a reflation of international prices after a pause in 1976, but also two other sets of data closely connected to the value of Romania's imports.

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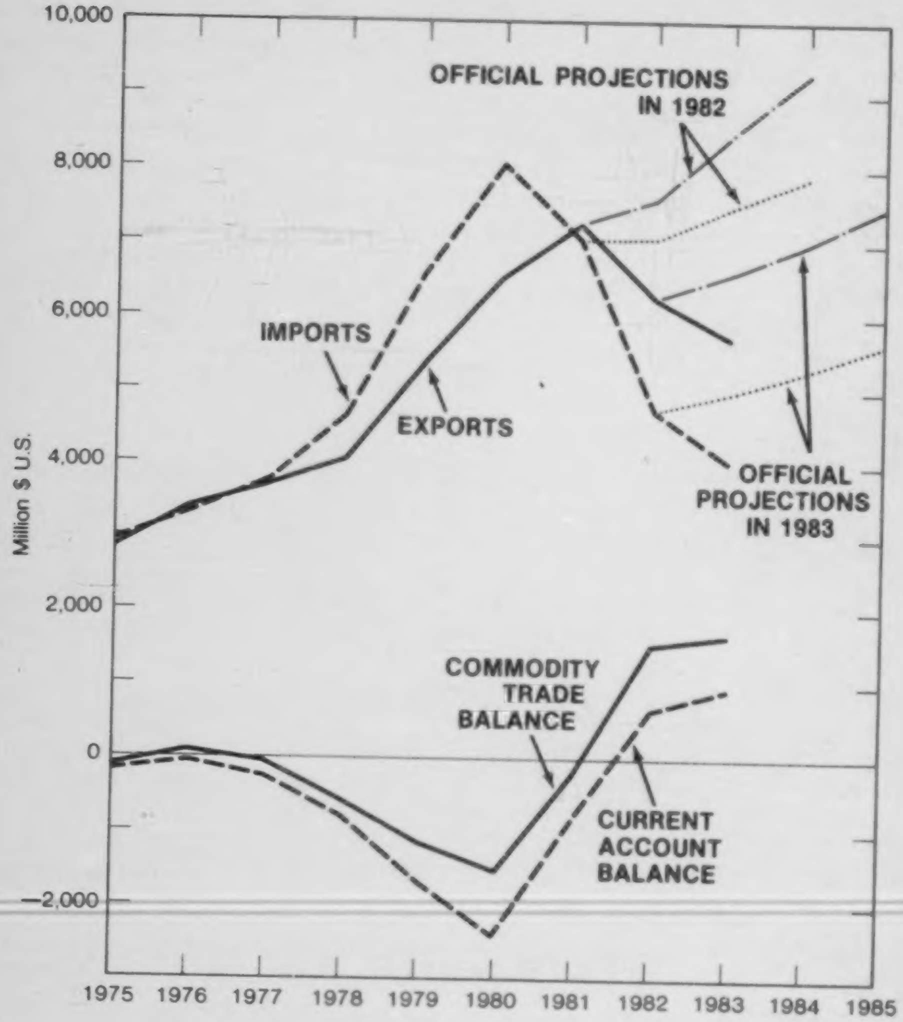
[5] Gabriel Eichler, "Country Risk Analysis and Bank Lending to Eastern Europe" in "Economic Assessment," Part II, p. 772; more comprehensive listings are in Vanous, CPE/CA, October 16, 1981.

[6] These growth rates are in terms of net material product. Independent western calculations of GNP show a similar decline in growth rates.

Figure 1.

FOREIGN TRADE AND PAYMENTS IN CONVERTIBLE CURRENCIES



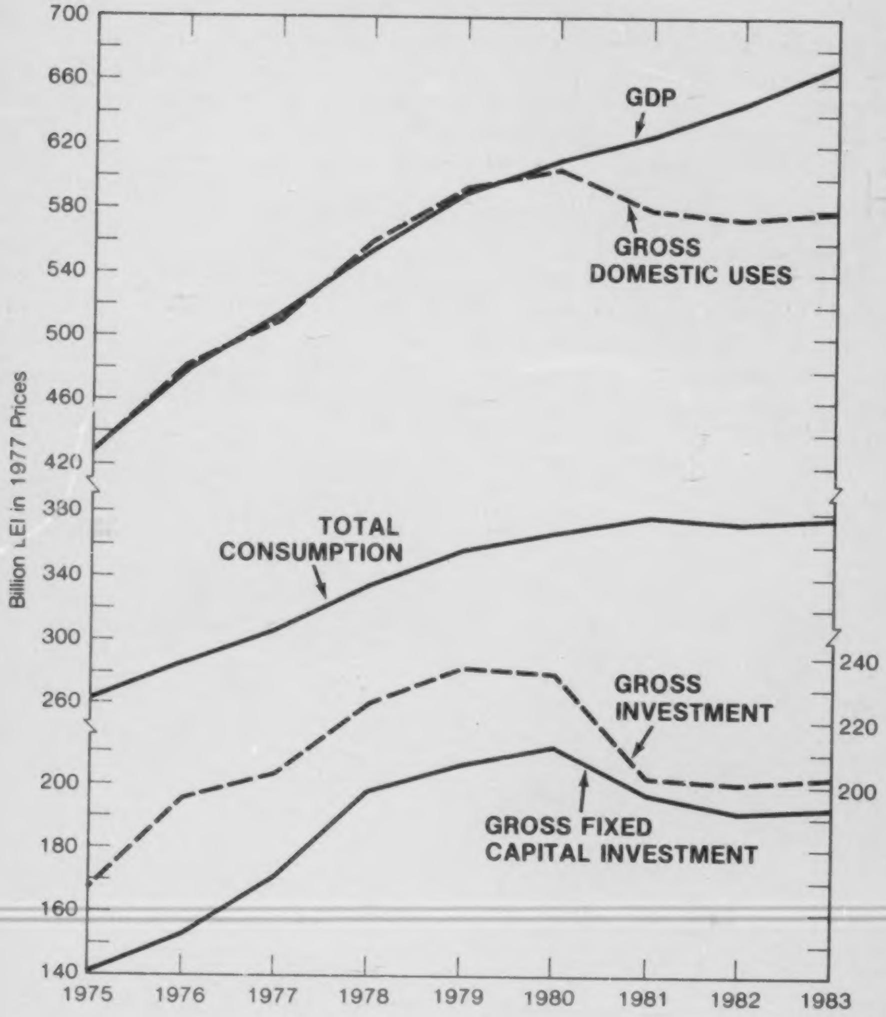
Source: Based on Annex Table 1.

Gross fixed investments, shown in Figure 2, grew 12 percent in 1977 and about 16 percent in 1978, both in real terms. The recorded growth rates were much higher than in either 1976 or 1979. Second, as seen in Figure 3, the current dollar value of petroleum imports rose 22 percent in 1977 and 39 percent in 1978. And Romania's deficit in petroleum products which grew to $187m in 1977 and $471m in 1978 about matched the overall deficits in convertible currencies shown in Figure 1. But things may have not been so simple. The growth in the values of petroleum imports was much higher in 1976 and 1979, but in the latter year the deficit in petroleum was reduced.

In 1979 and 1980 Romania's trade deficit in convertible currencies jumped up again in each year by a half of billion dollars, about what it did in 1978. By those two years additional debt and much higher interest rates added another half of billion in 1979 and $800m in 1980 to the current account deficits. And in 1980, unlike in 1979, a big 86 percent jump in the value of petroleum imports was not matched by the increase in the value of exported petroleum products. The deficit on petroleum account was actually larger than the total trade deficit in convertible currencies.

Figure 2.

REAL NATIONAL PRODUCT AND USES



Source: Based on Annex Table 3.

By 1979 gross fixed capital investments grew only 4 percent. A figure this small had not been seen in Romanian statistics since the 1950s. Then in 1980 the growth rate fell again, to only 2.6 percent. Both figures were below growth of 9.1 percent and 4.9 percent called for in the annual plans of those years. And the low growth resulted in not fulfilling the very high average targets of 12.8 percent called for by the five-year plan for 1976–80. The comparable average growth of gross fixed investments realized in those years was reported as 10.8 percent.[7] This was still a very high figure by any standard and nearly twice the figure typical of the other CMEA countries for this period.[8] The annual growth rates reported by Romania for fixed capital investments in 1979 and 1980 were especially high by CMEA standards. In Hungary average growth in the two years was negative, in the GDR less than one percent, and in the USSR and Czechoslovakia about 1.5 percent. Bulgaria had a decline of 2.2 percent in 1979 but then in 1980 was the only country to report a figure higher than Romania (7.6 percent).

Points at issue are whether Romanian planners were trying to restrict investments in 1979 and 1980 and, if so, out of what motives? Lower growth rates set in the annual plans might be evidence that they were, but those rates turn out to be high enough to have fulfilled the five-year plan for 1976–80 and reflect the usual tapering off of investment growth rates toward the end of a five-year plan. And even if planners were constraining investments they might have done so for reasons other than the balance of payments. One possibility might have been growing labor constraints.[9] Another might have been a growing inability of the Romanian planning-managerial apparatus to effectuate investments as planned. By 1980 their real volume was over 50 precent greater than in 1975 and about 160 percent greater than in 1970. Also, investments may have been held back by a growing relative inability to obtain or finance what Romanian project makers saw as necessary components of imported equipment.

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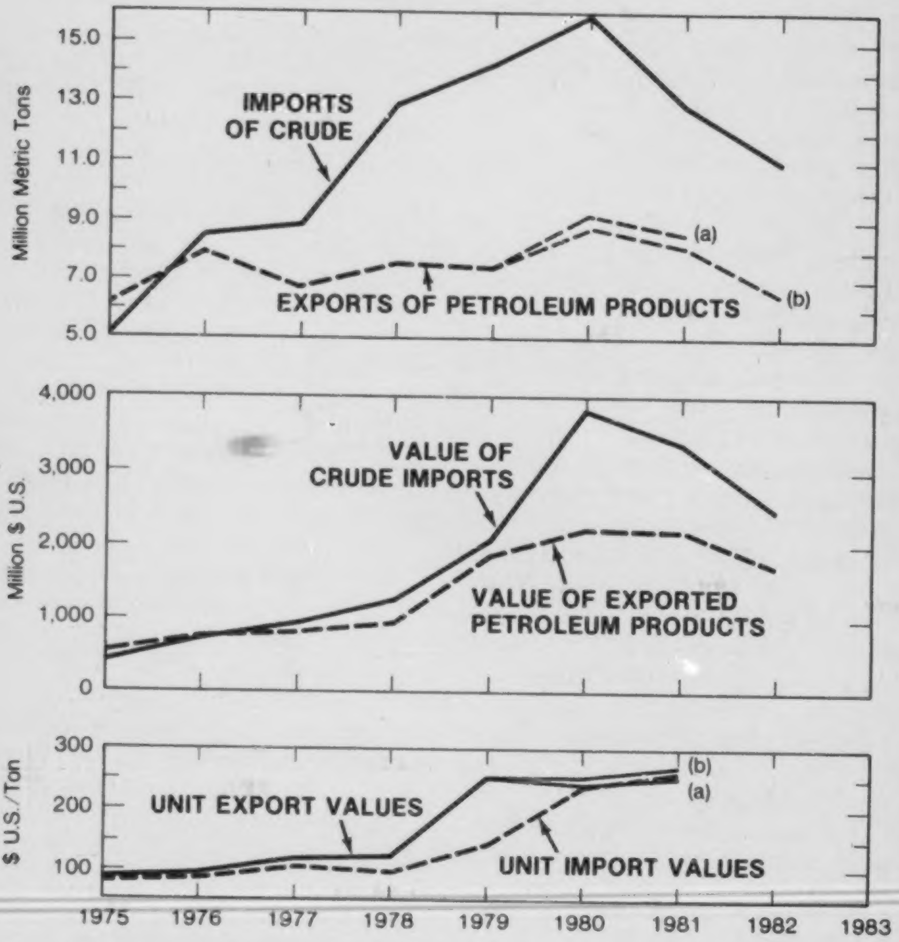
[7] Growth rates are calculated according to the way they are planned, as the average of each of the five years over each of the previous five years, and not as the growth from 1975 to 1980.

[8] See the "Economic Survey of Europe in 1982," p. 115, and Jan Vanous, Wharton CPE/CA III: 18–19 (March 17, 1983).

[9] Besides the paper in "Economic Assessments" labor constraints are reviewed in Marvin R. Jackson, Perspectives on Romania's Economic Development in the 1980s" in "Romania in the 1980s," edited by Daniel N. Nelson (Boulder, Colorado: 1981) pp. 254–305.

Figure 3.

PETROLEUM TRADE



Note: Line (a) reflects the original figures of tonnage published for 1980 and an estimate for 1981 derived from it. Line (b) is a revised series which, by lowering tonnage of exports, makes unit export values appear higher than unit import values.

Source: Trade volumes from the Romanian statistical yearbook in the *Romanian Economic Memorandum* (February 1983), trade values from the International Monetary Fund, *International Financial Statistics*.

B. The Crisis, 1981 to 1983

These issues will be considered again after describing events in 1981, 1982 and a bit of 1983 for which there is information. They are the years "in crisis," not "getting into crisis" and need some narrative of the complex events of Romania's rescheduling. The connection of these events to the other statistics based on annual data is facilitated by the help of Figure 4, showing quarterly movements in Romania's convertible currency trade, unadjusted for seasonal variations.

Romania's first hopes for 1981 may be taken as that year's annual plan published on October 18, 1980. It finally provided for a slight absolute decline in fixed capital investments of 1.7 percent (in 1981 prices) and included a novelty of a target for a 9.2 percent increase in fixed capital. Clearly planners intended to push investment flows to the completion of projects. The investment plan was also far below the average 5.2 percent growth figure for the five-year plan, 1981-85, approved in July, 1981.[10] These are good evidences that Romanian planners intended to restrain investments. But their motive may have been merely to push down a huge inventory of investment in unfinished products, possibly by the end of 1980 as much as 155 billion lei or more than 70 percent of investments planned for 1981.[11]

Foreign trade, as usual, was given in the plan only as total turnover without exports or imports and with no indication of a breakdown by convertible and nonconvertible currency areas. Other sources indicated that exports were planned to increase 21 percent from which one can deduce imports were not planned to increase at all over 1980 levels. A problem with such figures is that not only are they uncertain, but also Romanian leaders had been calling for foreign trade surpluses that never were realized in the previous years. Was one to take this as a lack of priority or a dysfunction in the Romania management system? And would 1981 turn out to be different? One indication might have been Foreign Trade Law No. 12 announced in December 1980. Among other measures it provided that organizations wishing to import would have to show export earnings, either in cash or countertrade, before imports could be authorized.

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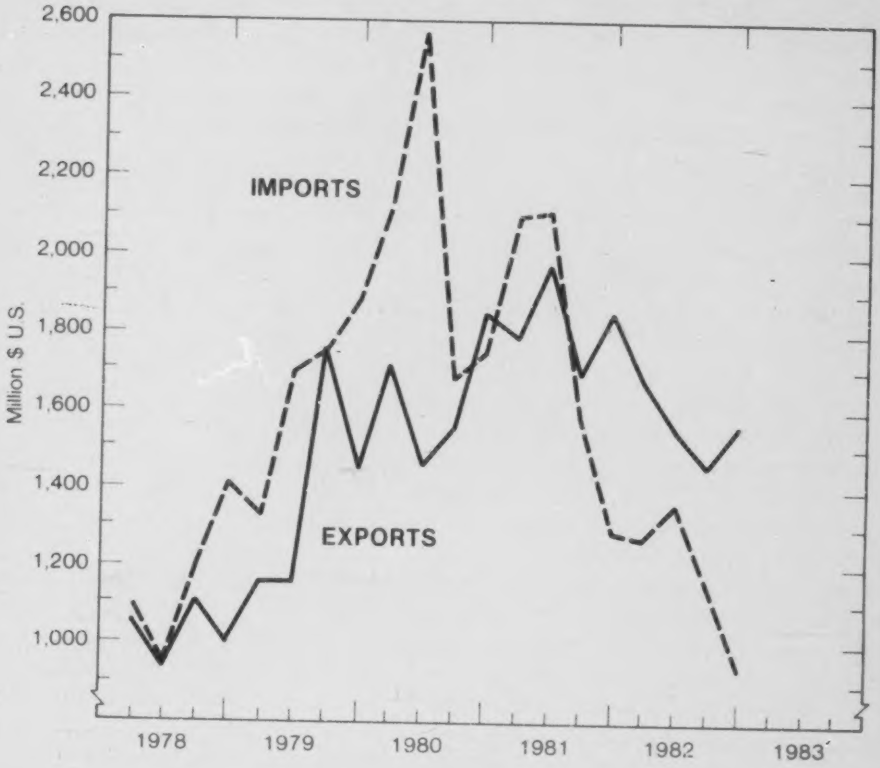
[10] Higher figures of 6.5-7.3 percent and 5.4-6.2 percent had been used in preliminary versions of the plan, respectively appearing in December 1977, and November 1979.

[11] Unlike other CMEA countries, Romania does not release official figures for investments in unfinished projects. The sums have been estimated as an accumulated difference between annual investment expenditures and annual investments commissioned.

Figure 4.

QUARTERLY IMPORTS AND EXPORTS IN CONVERTIBLE CURRENCIES



Source: Based on data in IMF, *IFS*, and the Romanian Economic *Memorandum* (May 1982) and (February 1983).

Figure 4 suggests that foreign trade balances in convertible currencies had been pulled into line in the third and fourth quarters of 1980. Even so 1981 began with reports of an increasing volume of late payments and requests for credit extensions by Romanian foreign trade companies.[12] That problem might have merely signalled the poor distribution of foreign exchange resulting from the sudden application of Foreign Trade Law No. 12. The evidence in Figure 4 shows another problem. In the first half of the year imports again jumped over exports in convertible currencies. And by the end of the first quarter, as shown in data of the Bank for International Settlements, Romania's liabilities with Western commercial banks rose while its deposits with them (and an important part of its foreign currency reserves) fell to only $147m. As a result of this pressure Romania went to the IMF for help.

The IMF program for Romania was announced 15 June 1981.[13] It included two loans, one of $195m to offset some of the deficit in the 1980 balance of payments and another of $1265m (SDR 1102.5 m) as a standby arrangement available in equal parts over the following three years. Romania immediately used $161m, part of the third available in the first year. In return for its support the IMF required Romania (1) to avoid any arrears in debt service, (2) to ensure that the deficits in trade and the current account in 1981 would be about $500m less than 1980, and (3) to undertake a long term program of management and financial reforms similar to those already proposed under Romania's own "new economic and financial mechanism" dating back to 1978. The IMF stressed rationalizing price system, especially foreign trade prices, and developing better monetary controls and incentives, especially for investments.

The targets approved by the IMF for the trade and current accounts balances in 1981 are additional evidence that the original plan targets for 1981 were not being met. It may be remembered that those targets called for zero growth of total imports and 21 percent growth of total exports. In the IMF-approved targets for 1981 imports in convertible currencies were permitted to grow 5.3 percent, while exports in convertible currencies were expected to grow only 14.4 percent. These targets would have permitted importing and exporting in the second half of 1981 at the same levels as already done in the first half of the year (see Figure 4).

In order for the IMF program to work in the shortrun Romania would have had to find something like $1300m in new international credits from the World Bank, commercial banks and suppliers. It also would have had to refinance as much as $2700 of existing debt (about $2056m short-term and maybe $650m of medium- and long-term debt). Its debt balance would have risen from about $10,160m at the end of 1980 to $11,500m–$12,000m by the end of 1981. If imports and exports in convertible currencies were projected ahead by growth rates of 5.3 percent and 14.4 percent, respectively, then a trade deficit of about $400m would have been achieved in 1982 with surpluses of $350m and $1,254m in 1983 and 1984. Given that Romania was actually recording an average interest of under 10 percent in 1982, then by 1984, given continued trade growth at the rates of the IMF-approved program, the country could have eliminated its current account deficit in convertible currencies.

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[12] See David Shirreff, "Romania Tries the Bankers' Nerves," Euromoney. November 1981.

[13] IMF Survey, press release No. 81150.

What actually happened in the second half of 1981 was something radically different than the IMF-approved program. Shortly after the IMF action Wharton Econometric Forecasting Associates issued a criticism of it, claiming the IMF had made it less likely that Romania would undertake any significant policy changes. Without these changes, Wharton was forecasting, mainly by energy use and import trends, debts jumping to nearly $13b by the end of 1981 and over $16b by the end of the following year.[14] Wharton then commissioned a detailed research report, published in September, which emphasized both the need for prompt action by Romania and the great problems it would face in carrying out adjustments of the order recommended by the IMF.[15] By the time this report was out there were clear signs that banks and suppliers were not willing even to turn over or extend existing credits, much less to raise new ones for Romania. Simultaneously, the country's government and financial managers were busy denying that the country had any fundamental problems and that they had any intention of requesting a debt rescheduling.[16] By November officially recognized arrears required the IMF to suspend further payments on the standby agreement. The arrears reached about $1.16b by the year's end. Exports in convertible currencies maintained about their levels in current prices of the first half of the year despite a bad harvest and food shortages. Imports fell 25 percent in the third quarter and another 20 percent in the fourth quarter compared to previous quarters. As a result, Romania ended 1981 with exports in convertible currencies up 11 percent but imports down nearly 13 percent compared to 1980. Also, the targets for the trade and current accounts balances set with the IMF back in June were exceeded by wide margins of $800m and $1000m, respectively. Romanian planners and managers have tried to give themselves credit for these great reductions in Romania's deficit. But it is quite clear that imports fell mostly because there were no means to pay for them. Finally, at a still uncertain point Romania raised the issue of rescheduling so that soon after the start of 1982, if not sooner it was negotiating toward this end.

In setting up the rescheduling the Romanians did not follow the examples of Poland in March, 1981, of convening creditor banks in mass and openly announcing the news. That was done against banker's advice.[17] Also, the banks finally chosen to negotiate did not have a formal mandate from other banks. Rather they were forced on the group by telex announcements from Bucharest that no payments on the 1981 arrears or on amounts coming due in 1982 would be made without a rescheduling agreement.[18]

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[14] See the Los Angeles Times, 8 July 1981, Part IV, p. 2. Similar questions are raised in "East European Markets," August 21, 1981, pp. 3-4.

[15] See Brada and Jackson, "Romania: Crisis or Turning Point."

[16] See, for example, the Wall Street Journal, October 20 and November 6, The Economist, October 24, and Euromoney, November, 1981. In CPE/CA, September 23, 1981, Wharton said Romania had already asked certain major Western banks to "roll over" its short-term debt.

[17] The Economist, November 14, 1981, special survey, p. 10.

Subsequent negotiations took longer than most parties expected. An agreement with government creditors was signed in July, 1982, leaving individual settlements to be negotiated. Bank negotiations took longer through the end of November and those with some Romania's suppliers took even longer. In the meantime the IMF in June decided to make available to Romania in the second year sums remaining from the first year plus the second tranche (SDR 595 m), but only after satisfactory rescheduling and an agreement between the IMF and Romania about conditions to be met if further support was given. Romania's government creditors agreed to rescheduling of 80 percent of arrears from 1981 and 1982 payments and interest, but not short-term debt which was repayable when due. The rescheduled sums were to be repaid after a grace period of three years in seven half-year installments. Some bank and supplier creditors unilaterally applied liquid Romanian assets under their control to the payment of arrears. The general bank agreement rescheduled 80 percent of 1981 arrears and 1982 repayments and interest due, including short-term debts with the same grace and payment schedule as with government credits. The 20 percent down-payment was due in the first quarter of 1983. Repayments would include a rescheduling fee of 1 percent and interest at LIBOR plus 1.75 percent. The Romanian terms differed from those in the Polish rescheduling, signed in early April, which required only 5 percent down-payment and gave a four-year grace period.

It is unlikely that Romania would have been able to raise any significant new credits in 1982 had rescheduling agreements been reached earlier. The delays assured the imposition of very effective, if also indiscriminate controls on imports. To this state of crisis from abroad was added constraints on internal supplies from another poor harvest in 1981. The impact of events, especially those external, is best seen as the difference in foreign balances projected for 1982 in the Romanian Economic Memorandum of 1982 and those finally recorded for the year. In place of a projected increase in exports in convertible currencies of just over 5 percent, these exports in current prices fell nearly 14 percent. Imports in the same currencies and prices had been projected in 1982 to remain at 1981 levels. Instead they fell by one-third and, of course, even more in constant prices on real volumes. The external financial consequences saw a trade surplus actually recorded of $1525m, about $1000m more than had been projected. This was enough to force the current account balance from a projected deficit of $450m to an actual surplus of $655m. The weight of crisis, it would seem, was not shifted from the external side to the internal one, as Romanian leaders, planners and managers tried to decide which internal priorities would suffer from decreased domestic supplies. This part of the crisis will be discussed shortly.

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[18] The negotiating banks included the Bank of America, Manufacturers Hanover, Barclays Bank International, Banque National de Paris, Creditanstalt Bankverein, credit Lyonnais, Deutsche Bank, Societe Generale, and Union Bank of Switzerland. The way negotiations were set up caused, at least initially, the feelings that Romania would try to divide and conquer and neglect the concerns of its smaller creditors. See the Wall Street Journal, March 3, 1982.

The state of external crisis in the short-run remained in the form of debt service due in 1983 which had to be covered on top of the down-payments due from the 1982 rescheduling. Probably having learned from the 1982 experience made the reschedulings in 1983 come earlier, in May with official creditors and in June with banks. Terms of rescheduling were only slightly less generous, requiring 30 percent down in place of 20 percent the year before. At the same time Romanian trade in convertible currencies continued trends set in 1982. Exports in the first half of the year were over 8 percent less than in the first half of 1981; imports were down even more, nearly 14 percent, by the same comparison. Again, real volumes of foreign trade have fallen even more considering price inflation.[19] This means that trends are set which could see even larger trade and current account surpluses in 1983 than in 1982. It remains to evaluate the effects of poorer crops and other factors likely to influence such trends.

III. CAUSES OF THE CRISIS

The narrative of events leading up to the crisis and of the crisis itself suggests that an attempt to identify possible causes ought to answer both why the rapid growth of foreign debt took place and why the end of borrowing was so abrupt. Bear in mind that not all CMEA countries were importing "too much" given the level of their exports, that those who did may have done so for different reasons, and, even then, the western banks seem to have kept lending to some, but not to others. In all probability there was no single cause or even two causes of Romania's debt crisis. Probably it was generated in a system of interacting events and structures. Three categories of possible causes will be reviewed: (1) external disturbances, (2) economic system traits and responses, and (3) country-specific policies and associated political structures.

A. External Disturbances

The Romanian economy was affected by external disturbances arising from "acts of nature" inside the country and from acts of man outside the country, the latter in the form of international inflation, recession and high interest rates.

One act of nature, a major earthquake on 4 March 1977, draws attention because it happened early in the first year of trade and payments deficits. Official Romanian estimates were that it cost $630m in lost foreign exchange spread out in 1977 and 1978, including additional imports of $250m, lost exports of $350m, and lost tourist revenues of another $30m. Had these losses all been in hard currencies, they would have covered 89 percent of the trade deficits and 61 percent of the current account deficits of the two years combined. No independent evaluations of these estimates have been made; if accurate, they would appear to have been mostly in hard currencies because Romania's nonconvertible trade balances were hardly disturbed from their usual near balance in 1977 and 1978. Besides a direct effect on trade flows, the earthquake might have disrupted domestic investment flows with consequences considered again below.[20]

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[19] Romania still does not provide her creditors or anyone else with estimates of foreign trade prices. Perhaps the World Bank or the IMF could fund a project to do so.

Two other acts of nature, bad weather in 1980 and 1981, came neatly at the point of crisis. The poor crops associated with them would be expected to cost foreign exchange, especially in the fourth quarter of the year and in the year following. In 1981, for example, Romania's deficit in convertible currencies for food and food materials increased $373m, nearly as much as the total deficit in convertible currencies in the first two quarters of that year of $448m. Here was a critical margin at a critical period just before Romania went to the IMF and as bankers began to back off.

Poor crops usually have another effect of tightening domestic food supplies, which then may react on creditors' views of a country's political stability and labor productivity. This was an obvious part of the reaction to Romania in 1981, a reaction that became steadily worse as news of that year's poor crop came in and then of food shortages and rationing. By then the foreign crisis overwhelmed the usual tendency for increased deficits in food and food materials following a poor-crop year. The next year, 1982, actually saw a convertible currency surplus in food and food materials and a net change from one year to the next of a plus $719m, enough by itself to account for 54 percent of that year's balance of trade improvement.

Disturbances from the international economy took several forms. One was the high level of interest rates, especially in 1980 and 1981, which caused Romania's president to denounce western bankers as "usurers." The average rate of interest paid on its debts in convertible currencies in 1979 was about 7 percent (gross interest paid in the year divided by the average of beginning and end of year debt balances). Had the same rate been paid in 1980, 1981, and 1982, Romania would have saved, respectively, $192m, $381m and $257m in foreign exchange. The savings in 1980 would have been only 8 percent of the actual current account deficit. Savings would have been more important in 1981 in order to have avoided the critical marginal deterioration of the balances of payments in the first half of the year. In addition, had interest rates been lower maybe Romania's financial managers would have tried to borrow less short-term and avoided a heavy volume of refinancing in 1981.

The other two international disturbances, recession and inflation, were more or less linked together through the two oil-price shocks, one in 1974 followed by a year of recession and turning around in 1975 and the other in late 1979 followed by recession in 1980, 1981 and 1982 which was extended or intensified by tight money policies. From 1975 on to 1979 Romania could participate in a generally increasing flow of imports from Eastern Europe in western markets. Then that market stopped growing and in 1980 began to shrink and did so through 1982.[21] The pattern of growth of Romanian exports for convertible currencies was very similar to the growth of western imports from Eastern Europe as a whole, as seen in Figure 5. Romanian exports grew more slowly in 1978, but faster in 1979 and 1980. The year of Romania's crisis saw the only marked departure in the pattern when Romanian exports grew 11 percent while western imports from Eastern Europe declined 14 percent. Thus, while Romania faced declining markets after 1979, its exports seemed to have suffered less in current value terms than did those of other CMEA countries in Europe.

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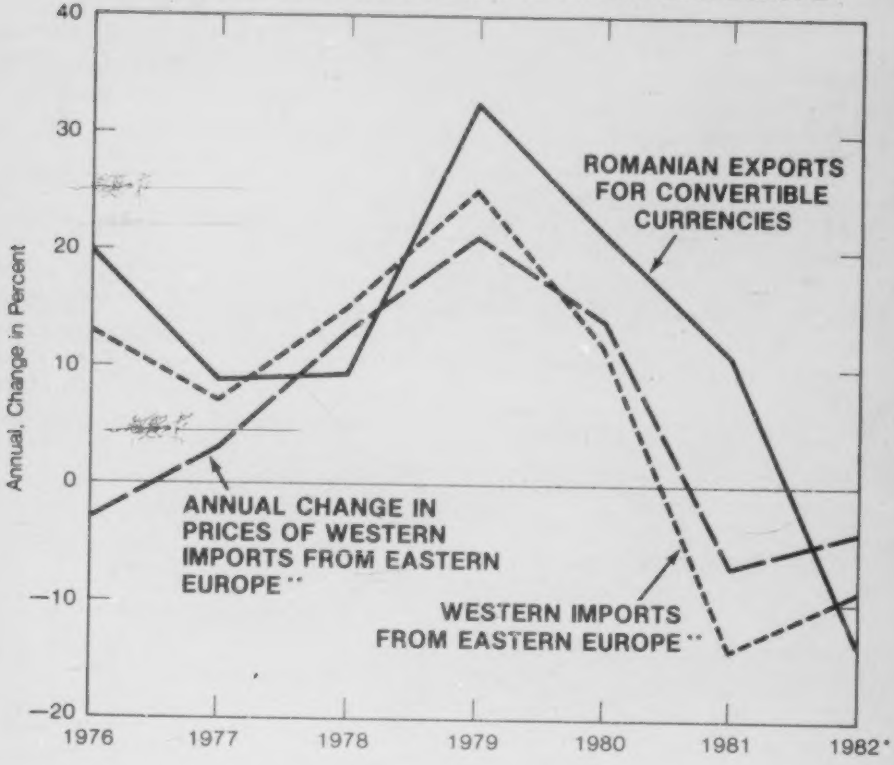
[20] The estimates of foreign exchange losses are cited in Andreas Tsantis and Roy Pepper, "Romania: The Industrialization of an Agrarian Economy under Socialist Planning" (Baltimore, 1979), p. 309. Also, see Jackson, "Romania's Economy at The End of The 1970s," p. 285, and Brada and Jackson, "Romania: Crisis or Turning Point," pp. 13, 18n and 60.

[21] See the "Economic Survey of Europe" 1982, pp. 16, 258, 259.

Figure 5.

ANNUAL CHANGES IN ROMANIAN EXPORTS FOR CONVERTIBLE CURRENCIES AND WESTERN IMPORTS FROM EASTERN EUROPE



* January-September

** Economic Survey of Europe in 1982, p. 259.

The oil-price inflation was a different matter for Romania was faced with paying OPEC prices for its crude imports, the only European CMEA member to do so besides Yugoslavia. But OPEC prices were generally a two-edged sword, also pushing up the prices of petroleum products exported by Romania. In 1975 Romania exported more tonnage than it imported, but in 1976 and 1977 imports rose marginally over exports by 633 thousand tons and then 2,102 thousands tons. Big jumps in net imports took place in the following three years before a decline was forced in 1981. The cost of the second round of OPEC price increases obviously depends on the amount of net imports. However their growth in 1979 and after hardly can be treated as an external disturbance. If the price increases of 1979, 1980 and 1981, as estimated by the unit import values of petroleum, are applied to net imports of 1977, their extra cost to Romania in 1979, 1980 and 1981 would have been, respectively, $92m, $294m and $368m. If the price increases are applied to actual net imports then their extra costs rise greatly, to $303m, $1009m and $839m. But in this case one must answer why Romanian planners responded to greatly increased prices by importing more.

B. Economic System Traits and Responses

At this point the discussion logically turns to the role of Romania's economic system as a cause of the debt crisis. A big problem with this system, and not just in Romania alone, has been the lack of correspondence between domestic relative prices and international relative prices, the ones determining the foreign exchange costs of imports and the foreign exchange receipts for exports. Under pricing arrangements typical for the system, planners have found it difficult to determine efficient patterns of trade. Moreover, prices have created dysfunctional incentives for importers and import users as well as exporters and users of exports. Price distortions for imported materials often have been carried forward through the costs and then the prices of other products.[22]

A specific example in Romania has been the price of crude oil which, whether from domestic production or from imports, was kept far below world price levels and so the domestic prices of petroleum products and chemical derivatives have also been relatively low. This is one possible explanation of why Romanian domestic consumption shot up so rapidly in 1979. Not only was energy consumption encouraged by the low prices, but also many new chemical facilities using petroleum feedstocks were commissioned. The effects of price distortions did not stop with domestic consumption. Some simple calculations indicate that Romanian exporters in 1980 and 1981 may have been getting as much as $25 per ton less for refinery products sold in western markets than what Romanian importers were paying for a ton of crude. Total foreign currency losses could have been $228m in 1980 and $195m in 1981, or a total value equal to Romania's loan receipts from the IMF in 1981.

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[22] For more details in Romania's case see, Marvin R. Jackson, "Prices and Efficiency in Romanian Foreign Trade," in "Quantitative and Analytical Studies in East-West Economic Relations," edited by Josef C. Brada (Indiana University: Bloomington, 1976), pp. 117-133.

On a broader scale it may be said that the greater the fluctuations of international prices, the more difficult would it have been for the Romanian foreign trade system to work effectively. Foreign currency losses could have taken place on a large scale or, more likely, foreign-exchange receipts reduced for a given volume of exports and foreign-currency payments raised for a given volume of imports.

Another systematic trait affecting foreign trade balances is likely to come into play when investments are raised and domestic supplies are overstrained. At such times it is much easier to justify marginal imports of investment goods. The technological interest of the project-makers tends to overwhelm the balance interests of financial planners. Export supplies may be diverted to domestic uses while imports are covered with marginal foreign credits. Both processes are encouraged if the volume of investments flows start to overwhelm planner's control and inventories of uninstalled equipment and unfinished construction rise across a multiplying number of investment projects. The evidence is clear enough that Romania was suffering from an intensifying case of this problem by 1977 and 1978. In 1980 and 1981 not only did unfinished construction shoot up to nearly 90 percent of annual investment flows but also the absolute and relative volumes of imported equipment grew rapidly. If the share of such equipment had remained at levels planned for the five-year period, 1976–80, then imports of machinery and equipment in 1979 and 1980 would have been reduced by about $1500m each year.[23]

C. Policy and Political Problems

It is a systematic trait of centrally planned economies when undertaking a rapid growth of investments to have a high probability of a breakdown in the management of investments and of seemingly uncontrolled importing of technical equipment. A Romanian official commented to the author recently that in 1979 and 1980 such importing was virtually "free," meaning without effective central limits. However, it does not have to be a systemic trait to choose rapidly growing or unusually high levels of investment.

In Romania's case in the 1970s high rates of investment come from policy choices seemingly associated with Ceausescu's monopolization of political power. Such policies also may have a longer, more general Romanian flavor, one which has also given priority to investment in industry. Even without a breakdown of controls over investments and imports, such policies will influence the balance of payments through the relative supplies and demands for goods traded in convertible and nonconvertible currencies.

In Romania's case these effects have been shown by simulating investment policy changes using a large-scale econometric model estimated with data for the period, 1959 to 1975, that is, before the onset of the crisis and major signs of a loosening of controls over investment and imports. The results show that Romania followed investment policies that put heavy strain on the balance of payments in convertible currencies. A small reduction of total investment would have relieved the balance of payments strain, but at the cost of reduced growth. A shift of investment from industry to agriculture, keeping total investment constant, would have improved the balance of payments dramatically and slightly raised the rate of growth.[24]

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[23] The calculations in this case are from Brada and Jackson, "Romania: Crisis or Turning Point," p. 64. This volume also contains detailed estimates of the volume of unfinished investments, pp. 18–22.

There is a major question of the extent to which Romanian leaders, planners, and economists, in general, understood the inherent risks of their investment policies. A balance of payments constraint is not a technically difficult question and rather obvious in the case of a small, developing economy. Nonetheless, research so far in the many articles written on the subjects of "optimial accumulation rate" and "the priority of industrialization" has turned up no clear or consistent statement of it. In particular, two economists, Manea Manescu and Emilian Dobrescu, who have been close to Ceausescu and high members of the government, do not give it heavy priority in their writing.[25] Both might have been inspired by the ideas of prewar economist Mihail Manoilescu.

It is also possible that Romanians have been and are misled by the poor quality of information about links between their domestic economy and the international economy. The problem goes beyond relative prices. Their information system still does not distinguish between changes in foreign trade quantities and foreign trade prices. Romania is the only European CMEA member lacking such estimates. And a common error found in articles on foreign trade is the correlation of foreign trade movements in current prices with movement of national income in constant prices. The relative growth of the former is easily exaggerated.

Even assuming that some Romanian economists understood Romania's balance of payment constraints, one can not be assured that expression of it could be heard or would be understood where it counted, especially after 1972. By then Ceausescu may have been the only one who counted at the level of strategy. As a party activist, his reaction to constraints of any kind is that they must be overwhelmed. In the case of foreign exchange, his likely reactions have been either to push exports from the top or do without the imports. In case of the latter it is no accident that Romania remains with a very low level of foreign trade dependency.[26]

As Ceausescu has gained steadily more power in Romania its economics policies seem to have benefited less and less from two-way or multi-lateral discussion before they are settled. The country is prone to high-risk, even "hair-brained" choices which easily backfire. An example might be Romanian plans to develop domestic energy production after 1975. It was intended to maintain domestic crude oil flows at a constant 15 million tons per year while doubling coal output by 1980 and tripling it by 1985. Schemes for deep drilling, secondary recovery and offshore drilling failed to maintain domestic crude output. Crash programs to unearth lignite in open pits probably wasted huge sums of capital. Shortfalls in both areas resulted in the importation of energy equivalents of plan shortfalls. Their estimated foreign exchange costs in 1979 and 1980 rose to about $650m and $1440m; respectively, 56 percent and 94 percent of trade deficits in convertible currencies.

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[24] Josef C. Brada, Marvin R. Jackson and Arthur E. King, "The Romanian Balance of Payments Crises: An Econometric Study of Its Causes and Cures," in "New Horizons in East-West Economic and Business Relations," edited by Marvin R. Jackson and James D. Woodson, Jr. (East European Monographs: Boulder, Colorado, forthcoming 1984). pp. 23–54. For additional information used in this research see, Josef C. Brada, Marvin R. Jackson and Arthur E. King, "The Optimal Rate of Industrialization in Developed and Developing Centrally Planned Economies: A General Equilibrium Approach," "World Development," IX:9–10 (Sept.-Oct. 1981), pp. 991–1004, reprinted in "Socialist Models of Development," edited by Charles K. Wilbur and Kenneth P. Janeson, (Oxford: Pergamon Press, 1981).

[25] Articles by Manescu, in English, on these and related subjects are commonly found as lead items in the "Revue Roumaine des Sciences Sociales-Serie des Sciences Economiques." Dobrescu's ideas are summarized in his book, "The Optimum of the Socialist Economy" (Bucharest, 1979). His discussion of economic growth in chapter II appears to be based on a model of a closed economy.

[26] For statistical evidence on this point see, Jackson, "Romania's Economy at The End of The 1970s," pp. 268–270.

Wastage in coal mining might have been even greater if resources had not been diverted after 1975 to another questionable scheme, the Danube-Black Sea Canal. The official cost estimates of this project have been given at $1.75b. While it did benefit Romania's balance of payments by the proceeds of a small World Bank loan in 1980, it almost certainly competed for labor and equipment that could have dug more open-pit coal mines. Also, even the officially estimated period of recuperation is 27 years, quite high for a country needing investment in other areas.[27]

A final point about the possible link between the policies of Ceausescu and Romania's debt crisis concerns the quality of economic contacts between Romania and its foreign partners. On one hand Ceausescu has adopted or extended policies which brought Romanians into contact with foreigners. Romania (1) joined the World Bank, IMF, GATT, (2) promoted joint Romanian-foreign enterprises, and (3) negotiated special arrangements for access to export markets in Western Europe and the U.S. At the same time he has tried to cultivate xenophobia among Romanians as a way of enhancing his own power. And if xenophobia hasn't always worked, he has succeeded in creating fear of contact with foreigners among Romanians, expecially at official levels. By laws on secrecy and other constraints he reduced the flow of published information about Romania's economy even below that of neighboring Bulgaria. Membership in the IMF and the World Bank made no difference until after the crisis. Not only were exceptionally poor standards of reporting tolerated by the leadership of those organizations. They also cooperated with the "confidential" stamp on the few pieces of useful information sent to them from Bucharest.

Romania may have been encouraged in these policies by western banks and other suppliers of credit. Loans seemed to flow whenever Romania asked for them with little apparent regard for either the depth or dependability of contacts with Romanian officials for the poor quality, definition and amount of economic information. Little wonder, then, that a very high Romanian official expressed to the author in 1982, as if surprised, that he thought Romania was being asked "to exchange data for credits." Unfortunately, by that time the information came a bit late. Romania's creditors had already found a new set of opinions about the country's credit worthiness, and taken flight.

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[27] The canal project is discussed in "*Scinteia*," April 22, 1983; World Bank, "Bank News Release," No. 80/144, January 24, 1980; and "RFER," Romanian SR/18, November 24, 1982, and Romanian SR/16, September 16, 1983.

D. A Summary

As suggested, Romania's debt crisis probably had multiple causes. The total effect of several external disturbances alone accounts for a large share of growing trade deficits from 1977 through the first half of 1981. But taken alone external disturbances would not seem to account for the seemingly cumulative character of the "disequilibrium" nor for the sudden abandonment of the country by western creditors.

Special Romanian policies and political arrangements must be seen as pushing the country on a risky course. No reserves seem to have been left for external disturbances in the country's balance of payments constraints by policies of high total investment and emphasis on industry. Nor was there room from the massive errors in energy planning. Furthermore, Romanian policies about information and foreign contacts seems to have promoted instability in foreign bankers' judgments of the country's credit-worthiness.

Both sets of factors acted within the framework of an economic system that promoted low foreign trade efficiency. The system also seems to have been prone to a kind of explosion of investment and import demand once pushed up to a critical level of pressure by a cumulative growth process.

In now turning to the consequences of Romania's debt crisis one concern must be to see if the system, once turned around by trade surpluses and supply shortages, tends to implode.

IV. CONSEQUENCES OF THE CRISIS

There are three broad categories of consequences of the Romanian debt crisis that ought to be discussed. Only two are considered in this paper: the impact on national production and resource allocations, including any resulting from changes in policy; and the impact on economic organization, especially the agro-industrial councils and the "new economic and financial mechanisms," both initiated before the crisis.

A third category, political consequences of the debt crisis, is ignored. But it would be interesting to know, for example, if participation in Romanian policymaking had changed. Equally interesting is the politics of Western bank dealings with Romania. Are higher bank managements, public and privated, yet prepared to demand necessary access to information and adequate contact for operational levels?

A. The Impact on Production and Resource Allocations

The discussion of impacts may begin by reconsidering Figure 1, above, and Annex Table 3. There the crisis is seen to have (1) reduced significantly the levels of both imports and exports and (2) increased the size of Romania's commodity trade surplus in convertible currencies. In the case of trade in nonconvertible currencies there seems to have been little impact in 1981 when exports rose 13.9 percent and imports 13.0 percent (see Annex Table 2). In

1982 and the first half of 1983 exports in these currencies grew less than what might be expected, 3.5 percent and 2.1 percent, while imports declined by 4.1 percent and then 9.9 percent.[28] The projections shown in Figure 1 are only one of two actually provided by Romania. The other is Romania's official plan for 1983 which called for nominal increases in lei values of total imports and total exports of 8 percent and 18 percent.[29] When corrected for devaluation this year, the plan implies a total commodity trade balance of $3000 million and one in convertible currencies of $2500-$2800 million.[30] This much larger figure is consistent with a goal set by Romania President Ceausescu in December, 1982. Then he said that the country's debt should be reduced by half their present levels by 1985.[31]

In order to judge the impact of these figures it must be remembered that they are in current prices. The real volume of Romania's imports in convertible currencies in 1982 could have easily been 25 percent less than indicated by Figure 1, or as low as the level in 1976 or 1977. At the same time Romania suffered a large decline in the terms of trade; that is, its export prices have increased much less than import prices. Therefore, if Figure 1 were corrected for inflation, real export volumes would not be shifted down quite as much as real import volumes and the gap between them would be even larger than suggested in Figure 1.[32]

The first impact of the debt crisis is seen as the Romanians were forced into larger than expected increases in real net exports. This impact may be exaggerated by Ceausescu's obvious desire to free himself of foreign bank influence. The other side to higher real net exports is lower real flows of final goods for investment or consumption. What complicates the analysis of this impact is that it came while Romanian planners were trying to correct the "over-investment" and "over-importing" conditions that developed from 1976 to 1979.

1. PRODUCTION, INVESTMENT AND CONSUMPTION

Figure 2 suggests that an adjustment in the Romanian economy started in 1980. Then three things took place. First, the growth rate of national product was reduced by half, from 6.6 percent to 3.3 percent in terms of Romania's own GDP estimates. Second, gross domestic uses grew even less, only 1.6 percent, and became less than GDP in 1977 constant prices.[33] Third, the adjustment took the form of reduction in the real value of increases in producers' inventories by about 25 percent, enough to pull total real investments down by 1 percent even though fixed capital investments rose by 2.6 percent. By contrast, the official Romanian estimate of consumption, including services, grew 3.3 percent, just the same as real GDP.

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[28] The figures for 1983 compare the first half with the same period in 1982.

[29] The plan published in "Scinteia", December 10, 1982, only gave total turnover. The details are from the Minister of Foreign Trade in "Scinteia" December 18, 1982.

[30] With devaluation the dollar values of imports and exports would grow, respectively, about 7 percent and 16 percent. The $3.0 billion trade surplus was described by President Ceausescu as one that could and necessarily "would be achieved." N. Ceausescu, "Cuvintare La Plenara Comitetu-lui Central al Partidului Comunist Roman 23-24 martie 1983" (Bucharest, 1983) p. 18.

[31] Scinteia, December 17, 1982. Ceausescu also added that the debt ought to be liquidated by 1987 or 1988.

[32] In the absence of Romanian statistics on foreign trade price one may only guess by comparison with other East European countries. Figures for the group may be found in "Economic Survey of Europe" in 1982, p. 250.

[33] This implies a "real" commodity trade surplus but only in the sense of volume movements. The trade balance that determined Romania's balance of payments was not in balance.

TABLE 2.—ROMANIA: CHANGES IN REAL NATIONAL PRODUCT ACHIEVED, PLANNED, AND FORECAST

[Percent per year]

	1979A[1]	1980A[1]	1981		1982			1983	
			B[2]	A[1]	B[2]	F[3]	A[1]	F[3]	B[2]
I. Romanian calculations:									
Net material product in:									
Industry	7.8	6.1		3.8			2.2	4.7	
Construction	1.3	0.4		−3.0			0.5	1.0	
Agriculture	1.8	−14.4		−2.3			7.3	4.0	
Other	7.6	6.6		11.7			2.1	0.3	
Total NMP	6.2	2.8	7.0	2.2	5.5	5.5	2.6	3.5	5.0
Services	7.9	2.7		1.9		3.1	2.5	3.3	
Depreciation	9.0	8.5		9.3		9.4	9.3	8.6	
GDP	6.6	3.3		2.7		5.7	3.2	3.8	
Industrial Production:									
Gross output	8.0	6.1		2.6					
Net output	7.6	8.6	8.1	4.0	5.6		3.3		8.0
Sales			7.0	2.6	4.7		1.1		6.6
Agricultural Production:									
Gross output	5.5	−4.1		−0.9	7.0		7.5		5.4
Net output			9.0	−2.2	6.8		7.6		6.1
II. Western calculations:									
Total GNP	3.7	−1.6		0.6			2.7		
Industry	3.2	3.2		−0.2			0.9		
Agriculture	2.5	−11.0		0.3			7.8		
Construction	7.3	−3.8		−4.7			−1.6		
T&C	6.3	1.8		0.9			2.5		
Trade	6.4	5.6		2.8			0.1		
Housing	2.5	2.7		2.4			2.2		
Gov. and OS	3.4	−2.1		5.8			2.4		

[1] Achieved.
[2] Planned.
[3] Forecast.

Sources: Achievements are from the Romanian statistical yearbook, the Romanian Economic Memorandum (February 1983) or (Western calculations) from Thad P. Alton et al., Economic Growth in Eastern Europe 1965, 1970, and 1975–1982. OP–75 Research Project on National Income in East Central Europe (L. W. International Financial Research, Inc.: New York, 1983). Planned data are from Scinteia, various issues. Forecasts are from the Romanian Economic Memorandum (May 1982) and (February 1983).

The adjustments just described became more pronounced in 1981 and 1982. The official Romanian estimate for GDP grew 2.7 percent and then 3.2 percent with 3.8 percent forecast for 1983. Gross domestic uses declined in 1981 by official measurements 3.8 percent and by 1.0 percent in 1982 with a small increase, 0.9 percent, forecast for 1983. Again in 1981 the increase in inventories was reduced by 78 percent and this time fixed capital investments also fell by 7.1 percent. Total consumption rose 2.7 percent. It did not fall according to official figures until 1982, then only by 1.0 percent. Gross fixed capital investments fell again by 2.7 percent, but the increase in inventories rose by 80 percent. The forecast for 1983 is for virtually the same increases in total consumption and total gross investments, respectively, 1.0 and 0.7 percent.

Additional detail on production is presented in Table 2. As expected sectorial output is more variable than the total. Construction has been squeezed since 1980. Bad weather impacted on agricultural production in 1980, 1981 and is expected again in 1983. Other NMP shows an unexpectedly large increase in 1981. Planned net output growth in industry was not fulfilled in 1981 and 1982 whereas commodity sales (or marketed production) in this sector fell even further short of the plan. Only agriculture performed as planned in 1982.

In terms of Romania's official statistics the broad impact of the debt crisis can be summarized as follows:

(1) The growth of national production has been unaffected since it was reduced in 1980 before the crisis and has been maintained at about the same rate, 3 percent, since;

(2) In order to provide the necessary export surplus, gross domestic uses of final products have been reduced to about 89 percent of gross domestic production in constant prices of 1977 (but only 97 percent of gross domestic production in current 1982 prices);

(3) The impact has fallen almost entirely on investment flows with gross fixed investments in 1982 at 90 percent and inventory investments at only 41 percent of 1980 levels in constant prices;

(4) The result of relative declines in investment is that Romania's gross investment ratio (to GDP) has fallen in current prices from over 40 percent to about 38 percent in 1980 to 34 percent in 1981 and 31 percent in 1982.

The official view certainly needs several points of qualification. First, the statistics suggesting that Romanian consumer have not suffered has no ready correspondence to conditions of life experienced directly by the author in Bucharest in the summer of 1983. Something more will be said about the divergence. Western calculations of Romania's GNP show less growth than official data with the difference concentrated, as usual, in estimates of value-added growth in industry. Also, by its pattern of growth the real crisis is in 1980 brought on by agriculture's failure. The debt crisis shows up especially as reduced growth of industry in 1981 and 1982. Finally, the impact of a reduction of total investment levels needs to be qualified by a consideration of the large stocks existing at the end of 1980.

2. INVENTORIES AND UNFINISHED CONSTRUCTION

The inability of Romanian planners to manage the rapid rise of investment spending resulted in the accumulation in just the six years, 1975 to 1980, of increased producers' inventories of 180 billion lei (in 1977 prices), a sum surpassing net investments in fixed capital in 1980 by 20 percent. A great deal of it is presumed to be unfinished investment projects, the value of which is usually considered as producers' inventories according to the normal practices of CMEA countries. Of course, Romania's system of accounting may differ. In any case, unlike many other CMEA countries, it does not publish statistics on unfinished investment projects, probably with the motive to conceal them. Table 3 shows estimates of their annual increases, derived by subtracting data on the values of investments commissioned from the values of investments spent. The totals in the table are significantly greater than the published official statistics on inventory changes in the national accounts just referred to. That may mean that the estimates in Table 3 are erroneous or it could be that other inventories have been declining.

TABLE 3.—ESTIMATED ADDITIONS TO INVENTORIES OF UNFINISHED FIXED CAPITAL INVESTMENTS

[Billion lei]

	1980 [1]	1981 [2]	1982 [3]
Sectors or branches:			
Total	55.1	22.1	21.8
Industry	24.3	15.2	5.7
Construction	0.4	−0.4	0.3
Agriculture and Forestry	5.1	3.5	[4] (10.4)
Transport and Communications	3.7	4.2	2.5
Housing	−.3	1.9	2.9
Branches of Industry:			
Energy	4.0	7.4	.9
Fuels	6.5	4.9	.9
Ferrous Metallurgy	5.1	−4.8	.6
Machinery and Metalworking	4.1	6.1	1.1
Chemicals	5.5	.5	.9

[1] Prices of January 1, 1977.
[2] 1981 prices.
[3] 1982 prices.
[4] The source understates investments spent in 1982 by not including sums for "water management."

Source: Calculated from Romanian Economic Memorandum, February 1983, tables 52–55.

Beyond question of accuracy the date require two points to be made. First, a reduction of investments need not have any immediate impact on the bringing on line of new production capacities if there is already a large volume of unfinished projects. All that is needed is enough to finish marginal plants. Inventory reductions could also supply consumption goods since they include goods in process as well. Both would be expected by better management of reduced flows of new investments. Second, what might be considered as surprising in Romania's case is that inventory investment was not negative. This has not happened. Stocks in producers' hands have grown each and every year. And, as suggested by Table 3, so have the value of unfinished investment projects, with a few exceptions.

3. TRADE BALANCES AND NET SUPPLIES

A reduction of inventories provides supplies in excess of current production.[34] Increasing net exports on the scale recorded in Figure 1 table 4 tend to push supplies below production. By how much is not at all clear. The net changes in foreign trade balances recorded in Table 5 are in US dollars and external prices. They may be multiplied by the "official" Romanian exchange rates (18 lei/dollar in 1980 and 15 lei/dollar in 1981 and 1982) or the values of exports and imports can be multiplied by estimated ratios of their values in *lei* (only the ratios for convertible currencies are reported in the *Economic Memorandum*). The problem is that neither result corresponds to movements in a figure "net exports of goods and non factor services and errors" which is reported in the Romanian national income and product accounts. Therefore, one is forced to consider the impact of changing net exports less rigorously.

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[34] Since inventories never were reduced absolutely, a more appropriate statement would be, "a reduction in the growth rate of inventory investments permits a growth in supplies in excess of the growth rate of production."

An initial point is the distribution of changes in net exports across board sectors of the economy. Net exports (sometimes negative) for each commodity group for both total trade and trade with non-socialist countries are presented in Table 4. The latter category, it should be noted, is not the same as trade in convertible currencies. Romania does have trade with socialist countries in convertible currencies.[35] More important than the balances are their changes from one year to the next, calculated in Table 5.

TABLE 4.—TRADE BALANCES BY MAJOR COMMODITY GROUPS

[In millions of U.S. dollars]

Commodity groups	1979	1980	1981	1982	1983
Petroleum and products: [1]					
X	1,859	2,205	2,199	1,705	
M	2,052	3,818	3,359	2,463	
B	−193	−1,613	−1,160	−758	
NSB [2]	−142	−1,268	−474	−701	
Other fuels, minerals, and metals:					
X	981	1,102	1,308	1,080	
M	2,682	2,629	2,695	2,450	
B	−1,701	−1,527	−1,387	−1,370	
NSB [2]	−1,037	−701	−553	−273	
Chemicals:					
X	864	1,087	1,185	1,143	
M	731	821	772	570	
B	133	266	413	573	
NSB [2]	−106	−79	100	198	
Building and other nonfood materials:					
X	710	784	819	755	
M	786	859	960	669	
B	−76	−75	−141	86	
NSB [2]	−129	−96	−93	123	
Machinery and equipment:					
X	2,548	2,791	3,657	3,822	
M	3,504	3,140	2,940	2,596	
B	−956	−349	717	1,226	
NSB [2]	−646	−219	830	1,090	
Foods and their materials:					
X	1,177	1,424	1,462	1,117	
M	786	1,166	1,295	591	
B	391	258	167	526	
NSB [2]	240	−231	−603	115	
Consumer manufactures:					
X	1,585	1,816	1,980	1,935	
M	371	385	436	406	
B	1,214	1,431	1,544	1,529	
NSB [2]	831	962	1,003	850	
Total:					
X	9,724	11,209	12,610	11,559	
M	10,915	12,818	12,457	9,745	

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[35] In 1982 exports in convertible currencies exceeded those to socialist countries by $229*m*; import by $106*m*.

TABLE 4.—TRADE BALANCES BY MAJOR COMMODITY GROUPS—Continued

[In millions of U.S. dollars]

Commodity groups	1979	1980	1981	1982	1983
B	−1,191	−1,609	153	1,814	
NSB [2]	−1,079	−1,632	210	1,402	

[1] Balances for trade in petroleum are calculated from data in the IMF, IFS except for the balance for nonsocialist countries. That is calculated as the total balance minus imports of petroleum (in convertible currencies) from the USSR, as indicated in the Romanian Economic Memorandum.

[2] Balance of trade with nonsocialist countries.

Source: Except as noted the Romanian Economic Memorandum (February 1983).

In 1981 Romania increased net exports by $1762m of which 60 percent came from increased net exports of machinery and equipment and 26 percent in increased net exports (by reducing the deficit) of petroleum and its products. In 1982 the share of overall growth of net exports from machinery and equipment was reduced. More of the "burden" (pressure on domestic supplies) was shifted to foods and some to other materials. Sources of change in the balances of trade with non-socialist countries followed a similar pattern in 1981, but not in 1982 when the contribution from food rose to 60 percent, that from other fuels, mineral and metals was 23 percent, but that from petroleum negative. The latter resulted from Romania's nearly discontinued imports of Soviet crude oil for convertible currencies in 1982 after purchasing over $600m in 1981 and over $300m in 1980.

Considering the overall effect of increasing net exports, assuming it is sensible to add values across payments and price regimes, one may conclude that 1981 saw nearly all the impact of diminished supplies on petroleum and machinery. In 1982 petroleum supplies still carried a large part of the total burden, but a major portion of what had been carried by machinery was shifted to food.

After increases in net exports of over $1750m in 1981 and over $1650m in 1982 Romania's future is clouded in 1983. The plan for 1983 called for yet another increase of $1000–$1200m in 1983. By contrast, the Romanian Economic Memorandum forecast a reduction of $364m, with a rise of $430–$585m in net petroleum exports and one of $280m in net food exports. The plan suggests more pressure on all sectors, including machinery and consumer manufacturers. The Memorandum would imply that pressure could be relaxed on those two general categories of industrial final products.

By the end of the first half of 1983, a hard currency trade surplus was earned of $711m, while in other currencies trade, Romania registered a $229m surplus. That put the country $256m ahead of the first half of 1982, not as much as the plan called for, still far ahead of the forecast in the Memorandum. The only information for commodities shows exports of petroleum and its products up 15.2 percent and imports down 8 percent in value. The gain in net exports, about $250m, thus is nearly the whole improvement in the balance of trade, and about in line with the Memorandum's forecast.[36]

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[36] See Jan Vanous, Wharton CPE/CA, III:73, 23 September 1983, and IMF, IFS.

TABLE 5.—CHANGES IN COMMODITY TRADE BALANCES

[In percent or millions of U.S. dollars]

Commodity group	Annual change in percent or absolute difference in balances			Share of the overall improvement in trade balances due to each commodity group			
				Total trade		Nonsocialist trade	
	1980	1981	1982	From 1980 to 1981	From 1981 to 1982	From 1980 to 1981	From 1981 to 1982
Petroleum and products:							
X (percent)	18	0	−22				
M (percent)	86	−12	−27				
B (millions)	−$1,420	$453	$402			26	24
NBS (millions)	−$1,126	$794	−$227			43	−19
Other fuels, minerals and metals:							
X (percent)	12	19	−17				
M (percent)	−2	3	−9				
B (millions)	$174	$140	$17	8	Mil		
NBS (millions)	$336	$148	$280			8	23
Chemicals:							
X (percent)	26	−9	−4				
M (percent)	12	−6	−26				
B (millions)	$133	$147	$160	8	10		
NBS (millions)	$27	$179	$98			10	8
Building and other nonfood materials:							
X (percent)	10	4	−8				
M (percent)	9	12	−30				
B (millions)	$1	−$66	$227	4	14		
NBS (millions)	$33	$3	$216			Mil	18
Machinery and equipment:							
X (percent)	10	31	5				
M (percent)	−10	−6	−12				
B (millions)	$607	$1,066	$509	60	31		
NBS (millions)	$427	$1,049	$260			57	22
Foods and their materials:							
X (percent)	21	3	−24				
M (percent)	48	11	−55				
B (millions)	−$133	−$91	$359	−5	22		
NBS (millions)	−$471	−$372	$718			−20	60
Consumer manufactures:							
X (percent)	15	9	−2				
M (percent)	4	13	−7				
B (millions)	$127	$113	−$15	6	−1		
NBS (millions)	−131	−41	−$153			2	−13
Total:							
B (millions)	−$419	$1,762	$1,661	100	100		
NBS (millions)	−$553	$1,842	$1,192			100	100

Source: Calculated from table 4.

A better idea of the impact of increases in net exports can be gained by combining this information with that for domestic production at the level of major areas of production.

(i) Energy and Other Materials.[37]—Romania has been fortunate to have natural gas which not only supplies about half of its total energy consumption, but also has been produced at or better that planned levels with output rising slowly (although not in the first half of 1983 compared with the same period in 1982).

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[37] All energy data for the first half of 1983 are from Jan Vanous, Wharton CPE/CA, III:73, September 23, 1982.

The output of primary electricity from hydrostations rose slowly until 1982 when drought so reduced river flows that output fell by 6 percent; it fell again in the first half of 1983 by about 8 percent. In this case Romania has been lucky that hydropower only supplies about 5 percent of total energy consumed. More primary electricity has been planned from nuclear plants, but Romania's program has failed from a succession of reasons, the latest being problems of obtaining import credits.

Failures in petroleum and coal production plans have been far more costly. Crude oil output nudged up about 100,000 tons in each of 1981 and 1982. But in the last year it was 6 percent below planned levels. The plan for 1983 called for 13.5 million tons, 15.3 percent above 1982 production, with something like 1.5 million tons scheduled from new walls and the rest squeezed from old ones. But in the first half of 1983 production was slightly below the same period in 1982.

Without further information it is difficult to tell which was worse, Romanian coal plans or the country's effort to execute them. After a 1981 plan calling for about 51 million tons (net) was met with reported output of only 37 million tons, it was a sign of some wisdom that the plan for 1982 called for only 44 million tons. But output barely rose one million tons. The 1983 plan calls for output of 52.2 million tons, a very large 38 percent rise over 1982. In all likelihood that won't be met. Still, what has been bad news for agriculture and hydropower, has been good news for coal. The drought meant good enough weather to produce more lignite in the open pits. By the first half of 1983 production was up by 21 percent in tons, but less in energy equivalent over the same period in 1982. By the first eight months that margin seemed to be holding.[38] These are hopeful signs that heavy and often poorly managed resource commitments to coal may be paying off.[39]

One payoff is some release of hydrocarbons to other uses. That may be the major factor behind the reduction of petroleum imports in the first half of 1983. What is interesting is that exports of petroleum products grew during the first half (compared to the first half of 1982). This came in the face of announcements that Romania would no longer export refinery products without a clear profit in convertible currencies. It also means that net imports of petroleum were down by about one million tons compared to the first half of the year in 1982. With production also down then clearly Romania's consumption also has fallen in the first half of 1983.

According to Wharton's estimated energy balances, Romania's energy consumption fell a slight 0.5 percent in 1981 and then 0.7 percent in 1982. Romanian reports indicated that energy use in 1981 and 1982 fell even more, respectively, 6 percent and 2 percent while planned energy consumption was to rise by about 2.7–2.8 percent in 1983.[40] Instead in the first half of the year Wharton estimates that total energy consumption may have fallen 3.6 percent. How much of this is increased energy efficiency in given uses or from shifting to less energy-intensive lines of production is not known. What is known is that shortages are common, including some unintended work stoppages and an extreme amount of pressure on Romania's consumers.

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[38] Revista economica, 1983:37, September 16, p. 8.

[39] A major problem is that lignite remains a very low quality; one report complained of cases where it is 200–300 Kcal/kg below plan. In place of 1.8 kg. of lignite and 0.73 kg. of coal per KWH, last January and February were needed 1.9 and 0.76 kg. (Revista economica, 1983:12, March 25, pp. 4–5). Another report said lignite costs had risen to 1,200–1,500 lei per ton extracted compared to 225 lei per ton in the 1960s, and during the same period return on fixed assets fell to a third or less of the earlier period. (Era Socialista, 1982:6, p. 13).

A glance back at Table 5 shows that Romania's other materials sectors (chemicals, building and other nonfood materials, other fuels, minerals and metals) increased their combined contribution to rising net exports, reaching nearly 50 percent in the case of trade with nonsocialists countries from 1981 to 1982. Pressure on supplies of raw materials and energy in 1982 may account for the reported absolute declines of output in ferrous and non-ferrous metallurgy. Chemicals and building materials grew only 1.3 percent and 1.7 percent, respectively. Aluminum output fell 14 percent in 1982. Steel output did not increase and remained over a million tons short of the plan. Chemical fertilizers, synthetic rubber and fibers were all seriously below plan.

The flow of materials to Romania's economy can be divided into two broad catagories, (1) those from mining and industrial processing and (2) those from agriculture. The former influence the first four commodity groups listed in Tables 4 and 5, although "non-food materials" contain some items like cotton and leather which are imported either because Romania doesn't produce them or sufficient substitutes (cotton), or doesn't yet have domestic products of sufficient quality (leather). With the possible exception of chemicals, Romanian imports in all four groups are items which are necessary and for which the only domestic substitutes may be the recycling industry. Again with the possibility of chemicals, it is unlikely that Romania can or ought to generate rising exports. That is, it seems unlikely that the future will see increasing net exports in any of the groups; in fact, decreasing net exports would seem the more likely.

Further balances will be influenced also by increases in the outputs of Romanian processing industries in the groups. Aside from domestic transportation, the big users of petroleum are electric power generation, chemicals, and exports of refinery products. The demand for inputs to the chemical industry will grow, especially as much delayed new capacity is completed for products like fertilizers, synthetic rubber, chemical and synthetic fibers, pesticides and others. As late as 1981, 53 percent of electric power in Romania was generated from hydrocarbons. That share is planned to drop to 30 percent in 1984, even without any nuclear capacity.[41] But still in 1983 some new capacity using hydrocarbons is to added to the country's generating stations.[42]

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[40] "Romanian Economic Memorandum 1983, p. 8 and Scinteia, January 9, 1983, a report by Ion Patan, minister of supplies.

[41] New installed capacity planned for 1981–85 is 63 percent from coal and bituminous sand, and 31 percent from hydro-sources. Additional capacity in 1986–90 from the latter are planned to be 33 percent of new capacity, while 43 percent is planned from nuclear stations, one at Cernavoda and two others in Moldovia and Transylvania. See the supplement to Revista economica, 1983:17, pp. 5–7.

[42] Revista economica, 1983:41, p.2.

TABLE 6.—INVESTMENT PATTERNS IN INDUSTRY

[In percent]

	Actual 1976–80 [1]	Plan 1981–85 [2]	Actual 1981 [3]	Actual 1982 [4]	Plan 1983 [5]
Industry as a share of total fixed capital investments	49.2	54.3	50.7	46.4	[7] 50.3
Branch share of investments in industry	100.0	100.0	100.0	[6] (100.0)	100.0
Power, fuel, and energy	24.3	33.2	29.0	31.7	
Metallurgy	11.1	9.7	9.6	9.1	
Machine building	25.3	19.5	25.9	[6] (18.8)	
Chemicals	15.3	17.5	14.7	14.3	
All other	24.0	29.1	20.8	26.1	

[1] In 1977 prices.
[2] Unknown prices.
[3] In 1981 prices.
[4] In 1982 prices.
[5] Unknown prices.
[6] It appears that the machine building sector is influenced by a large unallocated residual in the reported data for 1982.
[7] Share is reduced because of unallocated plan reserves.

Sources: Romanian Economic Memorandum 1981, p. 25, and 1983, pp. 25–26 and 119–120, and Scinteia, 10 December 1982.

Table 6 suggests some broad lines of Romania's industrial policy as it is reflected in relative investment allocations. The big petroleum users, chemicals, power, fuel and energy, have been receiving investments below levels originally set in the five-year plan for 1981–85. The table may be showing a shift in policy, but there are problems in interpreting the data (changes in prices, influences of lack of plan fulfillment and others). The other big user of imported energy and raw materials, ferrous metallurgy, has received investments about as planned. This fits with production plans calling for increased output of basic steel, even more specialty steels, and a continued emphasis on some steel-using products from the machine building sector such as tractors and transportation equipment.

(ii) Machinery and Equipment.—One of the bigger surprises in Romania's economy is the extent to which the machinery and equipment branch has contributed to increased net exports. As Table 5 shows, exports rose rapidly, 31 percent in current prices only in 1981. Imports also fell. So net exports shifted from a deficit of nearly $1b in 1979 to a surplus of over $1.2b in 1982. The surplus that year was approaching the over $1.5b recorded by Romania's consumer manufactured goods. In fact, in non-socialist country trade the machinery surplus was the larger, just over $1.0b compared to $0.85b for consumer manufacturers.

It is not surprising that the value of imported equipment in total equipment investments in Romania is recorded as having fallen 31 percent in constant prices in 1981. An official version of the same figure is unavailable for 1982, but the decline ought to be 10–15 percent. So the investment program seems to be supplied with only about half as much imported equipment in 1982 as was used in 1980.[43]

During these changes the country's own machine-building and metal-working industry increased its marketed output in constant prices by an official 2.2 percent and 3.5 percent, respectively, in 1981 and 1982. However, one may be worried by the share of new products reported in the output of machine-tools, electrical equipment and electronics. Products introduced since 1980 were 35.4 percent of output (compared to 28 percent planned) in 1982 and were planned at 40 percent in 1983.[44] So called "new products" are often just a chance for a price increase. As a result, the upward biases in Romania's industrial production index probably vary directly with the share of new products.

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[43] According to Avram, Minister of Machine-building Industry, domestic equipment was 85 percent of that used in investment. Scinteia, 14 January 1983.

The other point is that Romania already had one of the highest levels of self-sufficiency in machinery in CMEA. Industry clearly has been strained to meet domestic needs at this point. It is hard to imagine things being pushed further by more net exports without long term consequences on the relative quality of output across all sectors of the economy.

Romania is unlikely to increase net exports of machinery and equipment for any extended period. At present the industry is a bottleneck, unable to meet all domestic demands made on it. Those demands have been pushed up by constraints on imports. And it is doubtful if reduced investments have helped; while total investments have been kept from growing, the share of machinery and equipment probably has risen.[45] Besides, one may wonder how far the domestic self-supply program can be pushed or even how long it can be maintained at present levels without hurting both domestic productivity and export quality.[46] Which side may have to give is yet unclear as may be suggested by the following statement from Romanian President Ceausescu:

> These two years have brought into evidence the fact that some sectors of our industry are based too much on foreign imports and are unprepared to resolve problems rapidly on their own. Therefore we have considered that it is better to develop more slowly, putting an accent on solving problems with our own forces and so reducing dependence on foreign imports. We do not have and certainly we do not have the intention to promote an economic policy of autarchy, but we wish to realize development on the basis of an equal and reciprocally advantageous collaboration . . .[47]

(iii) Consumer Manufactured Goods.—A glance at Table 4 suggests that Ceausescu did not have in mind Romania's light industry (mostly textiles, clothing, and footwear) which supplied most of the exports of consumer manufactured goods. Some imports in this group come to Romania form barter trade, enhancing exports of machinery and equipment. Net exports would be even larger in the group if consumer durables and automobiles were put in it. Even without them, consumer manufactured goods was Romania's largest category of net exports counting all currencies, but in 1982 no longer in the case of non-socialist countries.

Recently light industry has had no difficulty keeping up with increases in both domestic and export demand, although clearly the quality of domestic supplies would fail competitive markets. Output has grown from 6 to 10 percent a year until 1982 when only 3 percent was realized. Lower growth could have reflected constraints on energy and material supplies or constraints on export markets. That year, too, Romanian domestic consumers faced their first year of officially-admitted lower incomes.

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[44] Scinteia, 15 January 1983.

[45] According to the Economic Memorandum 1983, p. 27, some 73 percent of investment flows in 1983 was planned for ongoing projects, about 19-20 percent was to provide new machinery and equipment for existing facilities and 7-8 percent used for new projects.

[46] See footnote 44. The plan for 1981-85 was set at 80-85 percent of domestic supply for equipment used in investments.

[47] Scinteia, 17 December 1982.

TABLE 7.—HOUSEHOLD INCOMES, EXPENDITURES, PRICES AND SAVINGS

[Annual growth in percent]

	1976–80	1980	1981	1982	Plan 1983
I. Incomes-expenditures in current prices:					
Material consumption total	8.4	7.9	6.7	16.7	([1])
Nonmaterial services	9.1	2.5	7.0	3.2	0.0
Socialist sector only:					
Money incomes—total	8.9	8.4	6.3	9.5	7.8
Wages and salaries—total	9.8	8.2	6.8	8.8	[2] (15.1)
Payments to peasants—total	5.4	2.5	2.5	7.2	28.0
Money expenditures—total	8.7	8.4	7.4	12.9	7.3
On new dwellings	10.6	4.0	10.5	13.0	14.0
Other goods	8.5	7.9	6.2	12.9	7.6
Services	8.9	10.0	10.7	12.6	6.6
II. Retail prices:					
All items	1.4	2.3	2.2	17.0	5.7
Food	1.0	1.8	1.7	([3])	([3])
III. Money Balances (year end):					
Total	16.8	13.8	10.8	4.4	5.5
As currency	13.2	15.0	5.2	8.2	6.0
As saving accounts	16.9	13.4	13.3	3.0	5.3

[1] The Memorandum projection is obviously erroneous.

[2] The Memorandum gives erroneous figures; the figure in the table is based on the plan for 1983.

[3] Not available.

Source: The Romanian Economic Memorandum 1983 and Scinteia, December 10, 1982.

(iv) Household Incomes and Expenditures.—From 1976 to 1980 money incomes of Romanian households from socialist-sector sources (excluding private sales) rose a rapid 8.9 percent per year. With retail prices officially rising only 1.4 percent per year, most of the change was translated into real income growth. In 1981 with less growth of money incomes and more growth of prices, real income growth was sharply reduced from an average of 6.1 percent per year, 1976–80, to only 2.2 percent in 1981.[48] Despite the rapid growth of money expenditures (which include items like taxes and contributions), money balances grew rapidly, 16.8 percent per year from 1976 to 1980 and 13.8 percent in 1981. During the worst years of the build-up of unfinished construction in 1978, 1979, 1980 and 1981 over 15 billion a lei per year were added to consumers' money balances, compared to only 9 billion in 1975 and 2.4 billion in 1970. In 1980 the increase in money balances was about 7 percent of total expenditures on goods (including new dwellings financed privately) and services. Money balances were then about half of one year's money income from socialist sources.

Work has not been done to try to test the possible effects of rising money balances on labor productivity in Romania. As late as 1980 Romanian officials said they were not worried because most saving was for future purchases of housing, automobiles and other durables. From 1975 to 1980, the value of new housing finished rose about 11 percent per year in estimated current prices but probably fell in 1981.[49] Automobile sales rose nearly 13 percent a year in physical units from 1975 to 1980. Data for 1981 are not given. But even with such growth the per capita amounts of housing and number of automobiles in Romania are the lowest in Europe (outside Albania).[50]

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[48] Note the figures of real growth are not adjusted for population changes. Also, the real income figures are based on different income and price concepts than those in Table 7. Romanian Statistical Yearbook, 1981, p. 96 and 1982, p. 43.

Conditions were greatly changed in 1982. Official retail prices jumped an average 17 percent, with retail prices of agricultural goods up by about 35 percent. Another 5–7 percent increase forecast by the Memorandum for 1983 probably was exceeded. It surely was if actual food prices and quality were taken into consideration (see below).

The resulting price increases pulled real retail sales down by 4.1 percent, real wages by 7.4 percent and real cash incomes by 5.3 percent. Money balances rose only 4.4 percent, the smallest increase since back in the 1950s. Given these decreases it is surprising that material consumption ("the consumption fund") fell only 1.5 percent in real terms. This is explained by another complication in Romanian statistics. Material consumption includes income-in-kind, most of which is generated by peasants and consumed by them. Probably income-in-kind grew at least 8–9 percent in real terms in 1982 (the statistics are not published).

What was planned for 1983 remains confused by discrepancies in the date published in the Memorandum. Its figures are neither internally consistent nor match figures for the 1983 plan. Its forecast was for no more than a small one percent increase in real income which with population change would be almost no growth. Probably the final figures for the year will show a second year of decreasing real income.

A critical role in the determination of living standards and workers' incentives will be played by agriculture. Table 8 suggests one reason. Food expenditure take exceptionally large shares of family expenditures in Romania. Differences in statistical methods across countries can not be disregarded.[51] Still, the numbers would suggest that Romanians are poorer, charged relatively more than for food, or have fewer other opportunities to spend their money than do people elsewhere in Eastern Europe. In 1981 Romanian shares spent for food rose marginally for both groups. Probably the data will show another rise in 1982 resulting from increasing relative (and absolute) prices and greater production for self-consumption by peasants. A different story may be reported in 1983 for now it is known that Romania's harvest may not be a good one. But the Romanian Economic Memorandum for 1983 forecast rising exports from agriculture in the year of 25 percent and declining imports.

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[49] Housing finished is assumed to be measured by "commissioned investments", while the growth figure is based on 1975 in 1977 prices and 1980 in 1981 prices.

[50] For example, in 1978 automobiles per 1,000 families were only 31 percent of the levels of Bulgaria, but rose to 47 percent by 1981. Living space per person in housing in 1978 was only 77 percent of Bulgarian levels in urban areas and a lower 53 percent in rural areas. For more extended comparisons see Jackson, "Romania's Economy at the End of the extended comparisons see Jackson, "Romania's Economy at the End of the 1970s," p. 256, and UN, Economic Survey of Europe in 1982, p. 195.

[51] In particular Romania might exaggerate the amount of food produced and consumed by peasants.

The implied increase of net exports of about $280m would not be good news for Romania's consumers.

TABLE 8.—PROPORTIONS OF FAMILY BUDGETS SPENT ON FOOD IN ROMANIA AND OTHER CMEA COUNTRIES, 1980

[Percent of total expenditures]

	Workers' families	Peasant families
Romania	45.6	62.7
Bulgaria	36.8	41.4
Czechoslovakia	27.0	26.0
G.D.R	27.1	26.5
Hungary	33.8	35.9
Poland	42.9	44.6
U.S.S.R	31.7	35.9

Source: UN, Economy Survey of Europe in 1982, Pari II, p. 194

(v) Agricultural and Food Supplies.—In 1977 following the excellent crop year of 1976 Romania achieved an export surplus in foods and their materials of $770*m*, one which then steadily declined to only $161*m* in 1981. As seen in Table 4, the values of exports did not decline; instead the declining surplus came with rising imports, much of it in animal feed from non-socialist countries. As a consequence the deficit with that group of countries reached $603*m* in 1981.

Declining net exports in foods and their materials is the logical consequence of the poor performance of Romanian agriculture. By official statistics gross output in 1980 was only 3 percent above 1976, 5 percent below in the case of crops and 14 percent above in the case of animal products.[52] When gross output declined again in 1981 for a second year in a row, it would have been expected that net exports of food and food materials would also have declined. Instead, net exports in 1982 increased, raising an important question of the extent it happened because of a more hurried collection and export of the larger output recorded in 1982 or because domestic supplies of food for humans and animals were reduced.

The evidence is difficult to interpret partly because the effects of actual reductions in supplies are not easily separated from the effects of market disorganization. In conditions of disequilibrium markets the two often go together. That things were going wrong is clear. The author was in Bucharest in May, 1982, and again in June, 1983. Supplies were tight at the time of the first visit; by the second visit the situation badly deteriorated. Queues of several hundred were a daily occurrence, even for poultry, but formed for nearly everything. Other meat could hardly be found except through special channels. Sugar and cooking oil were still rationed, as they had been since late in the last summer. Bread that had been rationed in the fall of 1982 and the winter was not, at least in Bucharest.

The available statistical evidence makes some conditions clear and confuses the view of others. Part of the rise in net exports in

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[52] Most of the output growth was a result of increased inputs. Value-added in the sector declined over 13 percent from 1976 to 1980 in official terms, then 2.3 percent in 1981 under 1980.

1982 came from the reduction of imports of food and food materials. An important item was a 58 percent decline in the unit value of fodder imports, a change allowing an increase in the physical volume by 25 percent while payments were reduced $127*m*. Also on the import side was a reduction of sugar imports from 194 thousand tons in 1981 to only 98 thousand in 1982. When combined with a drop in production this explains why sugar was scarce. There remains a large part, $459*m*, of the decline in import values unexplained in the Memorandum. Within it was a large part of coffee imports.

On the export side, there was an increase in edible oil exports, but also there was an increase in production. Net domestic supplies fell only 3 percent, plus some imports of olive oil. The bread shortage is not explained at all. In this case, cereal grain exports declined 442 thousand tons from 1981 to 1982 while reported cereal production increased about 2 million tons. A likely source of problems is that the production figures far overstate the amount of cereals actually delivered for any use.

A strong indication of supply shortages is the discontinuation of published figures for retail sales in physical units in the most recent Romanian yearbook. The numbers disappear with 1981. This has only helped make more confusing the record for meat supplies, the indicators of which are presented in Table 9. Several parts of the table need comment.

TABLE 9.—INDICATORS OF MEAT PRODUCTION, CONSUMPTION, AND EXPORTS

	1978	1979	1980	1981	1982
1. Total production—live weight (1,000 tons)	2,415.0	2,571.0	2,476.0	2,400.0	2,174.0
2. Per capita consumption—live weight (kg.)	54.8	59.4	62.0	60.5	......
3. Total consumption—live weight (1,000 tons)	1,198.0	1,310.0	1,377.0	1,352.0	......
Residual live weight (1,000 tons)	1,217.0	1,261.0	1,099.0	1,048.0	......
4. State retail sales plus exports (1,000 tons)	850.0	985.0	1,002.0	[1] (1,025.0)	[1] (865.0)
5. Industrial production:					
Slaughter production w/o fat (1,000 tons)	863.0	1,012.0	993.0	989.0	1,096.0
Preparations from meat (1,000 tons)	221.0	247.0	279.0	308.0	......
Conserved meat (1,000 tons)	67.0	77.0	77.0	64.0	22.0
6. State retail sales (1,000 tons)	667.2	740.0	798.1	[2] (819.0)	[2] (651.0)
(Per capita retail sales (kg.)	(30.5)	(33.6)	(35.9)	([3])	......
Meat (1,000 tons)	395.3	440.5	462.7	([3])	......
Live fowl (1,000 tons)	31.3	32.6	27.6	([3])	......
Meat preparation (1,000 tons)	182.5	204.3	236.7	......	......
Conserved meat (1,000 tons)	36.0	42.0	49.0	......	......
Fat and bacon (1,000 tons)	22.1	20.6	22.1	......	......
7. Exports:					
Meat and products from meat (1,000 tons)	157.9	224.9	191.4	206.3	[4] (214.0)
Edible fats w/o butter (1,000 tons)	24.9	20.5	12.9	([5])	([5])
Value w/o edible fat (mil $)	226.8	350.3	319.0	198.8	206.7

[1] Estimated as the same proportion of industrial production as in 1980.
[2] Estimated as (4) minus (7a).
[3] No longer published.
[4] Estimated as the same growth over 1981 as the value of exports.
[5] Not available.

Source: Official statistical yearbook and Romanian Economic Memorandum.

First, the case of meat exports is one of several where the Romanian Economic Memorandum provided questionable information. It gave exports of meat and products from meat at only 107 thousand tons in 1981 when the official statistical yearbook gave a figure of 206 thousand tons. Earlier years data were the same in the two sources. For this reason a figure given by the Memorandum as exports for 1982 is unacceptable. Instead Table 9 shows an estimate which assumes that the physical volume grew as fast, 4 percent, as the value of exports in current prices.

Second, according to a reliable source in Romania, the figures often cited in Romanian publications for the per capita consumption of meat and meat products is in kilograms of liveweight equivalent, not actual consumption. Actual consumption might be estimated at two-thirds the amount in live weight, or about 41 kilograms in 1980. Translated further, this is about 115 grams or one-fourth pound per day. That figure declined about 2 percent in 1981 by data in the official statistical yearbook. It must have fallen further in 1982, but how far?

As shown, total meat production declined in live weight by 9.4 percent in 1982. Industrial production of meat and meat products in actual slaughter weight fell a larger 14 percent. It is the source of most export and state retail sales. Their totals for 1981 and 1982 are estimated in Table 6 as the same ratio as in 1980, the last year for available retail sales data. Then retail sales for 1981 and 1982 are estimated as the residual after subtracing exports. The result suggests that retail sales of all categories of meat listed in the table fell about 21 percent in 1982.[53]

Retail sales provide only part of the meat and other foods consumed by households in Romania. Part comes from peasants, their self-supply and their sales in peasant markets. The latter alone is said to have provided over 40 percent of the meat consumed in Romania in 1978.[54] The share of self-supply is not published; it could be one of the relatively safe ways to exaggerate the per capita consumption and production data. What is published is the amount of meat produced by peasants on their personal plots and in private agriculture. In 1978 the two sources contributed 45 percent of total output, while in 1981, the latest data, the share was only 44 percent.

With declining production it must be assumed that peasant marketing would have also declined. This is the opinion of Bucharest consumers who, however, add another point. It is said that peasants are no longer so interested in coming to town because they are paid far higher prices for deliveries to the state as a result of producer price increases of 11 percent at the beginning of 1981, 16 percent at the end of that year and more in 1983.[55] Also, peasants were discouraged by higher transportation costs, including the shortage of gasoline for private automobiles. Finally, it was also clear that getting higher prices was easier if sales were made in the countryside beyond the eyes of the state inspectors around the town markets. To get meat one needed a way to get to the countryside, a contact with a willing peasant, and possibly the right thing to exchange, not always money.

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[53] The method of estimating may overstate retail sales in 1981. If the figure actually increased, then it is hard to explain why publication was discontinued.

[54] O. Parpala, Econimia si political agrara in R. S. Romania (Bucharest, 1980), p. 342.

[55] The implicit prices for value-added in agriculture rose 18 percent in 1981 and 37 percent in 1982, suggesting even greater price increases.

Recently President Ceausescu said, "We should not fear that some peasants might become rich," but in the same breath added, "The unconditional delivery of contracted products to the state procurement agencies must be guaranteed . . . . Higher private consumption can only be permitted if overplan output has been achieved." [56] It is clear that Ceausescu did not mean for peasants to get rich by over-slaughtering animals and selling the meat directly at unusually high prices. In fact, what the government has done recently is to mandate the minimum number of animals to be maintained by each rural family, to require registration of all larger animals, and to permit slaughtering of them only with official permission and only in state slaughter houses. At the same time, measures have been taken to stiffen price ceilings mandated in peasant markets and to control access to them by enforced license requirements.

Measures to "organize" peasant marketing indicate what so far has been the predominant official response to the food problem since it began. That is, to blame the problem on negligent personnel in supply agencies as was done when some were fired after a whirlwind inspection of Bucharest markets by Ceausescu in October, 1982.[57] At about the same time consumers were blamed for trying to overstock for the winter. Then rules were passed to limit purchases of winter vegetables on grounds that households had inadequate storage facilities. Unfortunately so it seems, neither has had the state nor the farms.

It has been much harder for official Romanians to admit that they have followed investment and other development policies which has left the agricultural sector with no reserves and no way to avoid the consequences of the weather in the Balkans. Ceausescu finally did this in a speech where he also proposed the notion of a "new agricultural revolution" in Romania. In it he stated:

> In the light of the experience of the socialist construction in our country, it appears now very evident that the thesis of priority industrialization to the detriment of the development and modernization of agriculture brought, in fact, neglect of the importance of the growth of agricultural production. Application of this orientation determined disproportions in general economic-social development and negatively influenced the level of living of the people.[58]

Ceausescu did not explain at that time, nor has he or any other Romanian official since explained, who was responsible for this rather serious error of policy. In fact it has not been one of the more popular themes in Romanian economic literature since then.[59] Perhaps the matter is a bit delicate.

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[56] Scinteia, 29 January 1983.

[57] See Scinteia, 5 October and 16 October 1982.

[58] Nicolae Ceausescu, Cuvintare la Congresul al II-lea al consiliilor de conducers ale unitatilor agricole socialiste, al intregii taranimi, al consiliilor oamenilor muncii din industria alimentara, silvicultura si gospodarirea apelor, 19 February 1981. Cuvint de inchidere, 21 February 1981. (Bucharest, 1981)

[59] The strongest statement so far is one made by Professor N.N. Constantinescu in a collection of papers published in 1982. He said that the thesis came from those who worked in industry in a series of central organs who wanted to justify exaggerated investments in industry "even when these were being scattered and not commissioned on time." He listed the results as (1) not having enough agricultural raw materials to supply industry, (2) not having enough domestic

Continued

TABLE 10.—INVESTMENT PATTERNS BY SECTOR OF THE ECONOMY

[In percent]

	Actual 1976–80 [1]	Plan 1981–85 [2]	Actual 1981 [3]	Actual 1982 [4]	Plan 1983 [5]
Industry	49.2	54.3	50.7	46.4	50.3
Construction	5.9	3.3	3.5	3.6	6.8
Agriculture and forestry	13.8	([6])	15.8	13.3	([6])
(With water management)	([6])	(12.9)	(17.3)	(16.8)	(16.7)
Transportation and communications	10.3	17.3	10.6	13.5	10.6
Housing	10.2	9.0	11.3	12.9	12.3
Unallocated reserves		([6])			6.1
Residual	10.6	3.2	6.6	6.8	−2.1
Total	100.0	100.0	100.0	100.0	100.0

[1] In 1977 prices. [2] In unknown prices. [3] In 1981 prices. [4] In 1982 prices. [5] In prices of December 21, 1982. [6] Not available.

Source: Romanian Economic Memorandum 1982, p. 25, and 1983, pp. 25–26 and 119–102, and Scinteia, December 10, 1982.

It remains to note what, if anything, has since been done to remedy the neglect of agriculture under the heading of the "new agricultural revolution."

One clear response so far is an increase in fixed capital investments in agriculture compared to what had been planned for 1981–85. This is indicated in Table 10 where both agriculture and housing seem to have been so benefited. This coincidence raises the possibility that a cause could be the lower content of imported goods in their typical investiments. The additional allocations for 1983 are about 9 billion lei or about 30 percent more than originally planned.[60]

A major part of the investments are destined for a new program of irrigation with long-term targets of 2.4 mil. hectares under irrigation by 1985 and 5.5 mil. hectares by 1990. The latter figure is about a third of total agricultural land and about all for which irrigation would be feasible. But it is only a plan and one may remember that a previous irrigation plan had called for the same target, 5.5 mil. hectares, to be irrigated by 1985, five years earlier.[61] An important problem in the irrigation program so far developed, as it is in programs for livestock production, is not just investments but also the quality of their execution and subsequent operation and maintenance. It was possibly wise for the Romanians not to make material investments without improving agricultural labor.[62]

The Romanian Economic Memorandum claimed that a combination of direct administrative and economic measures had stabilized

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food supplies and export capacity, (3) having animal herds without a sufficient fodder base, (4) having a problem that production in the field was seriously larger than production harvested, and that in turn was all the more larger than production in storage, and (5) having a large population occupied in agriculture and little use made of it. Its causes were insufficient investments, quantitative and qualitative, poor quality industrial supplies of equipment and chemicals, inattention to labor quality, and others. N.N. Constantinescu, "Raportul rational dintre industrie si agricultura in conditiile Romaniei. Critica tezei industrializarii in detrimentul dezvoltarii si modernizarii agriculturii," in Noua revolutie agrara in Romania (Bucharest, 1982) pp. 41–65.

[60] Calculated from The Romanian Economic Memorandum 1983, pp. 26–27.

[61] These and other useful facts about the program of irrigation and land improvement are set out in Radio Free Europe Research (hereafter noted as RFER), Romanian SR/Z, 29 January 1983, and Romanian SR/13, 28 July 1983.

[62] On the quality of irrigation and livestock operations, see Revista economica, 1983:10, pp. 6–7 and RFER, Romanian SR/6, 30 March 1983.

agricultural labor in 1982 at 1981 levels. However, it failed to note that the low growth of industry might have helped; that is, few new jobs were created. One administrative measure taken early in 1982 requires that at least 60–65 percent of the total population connected to each cooperative shall execute work on the cooperative. The same law obliges management, technical and administrative personnel to do field work during peak demand. That measure plus another one in 1981 requiring the same personnel to live in the locality of their jobs may well discourage working in agriculture.[63]

Where people hesitate to come to the land recently more effort has been made to direct marginal land to private and personal production. Thus, factories around towns and cities are encouraged to give land for the use of pensioners and weekend farmers. Agricultural cooperatives may turn over land that is hard to mechanize for members use for periods of 3 to 5 years. And the most recent statutes for the cooperatives give stronger guarantees of personal plots, but also makes them subject to output planning.[64] These are parts of a program emphasizing district self-sufficiency in basic foods.

As of the end of 1981 the agricultural labor force was made up of about 400,000 state workers and employees and 2,200,000 persons from agricultural cooperatives, many of whom worked only part-time. Back in 1979 the average net income per active cooperative peasant was only 66 percent of the average net industrial wage and by 1980, a year of lower agricultural production, it fell to about 60 percent.[65] In that perspective the ratio for 1982 of 73 percent shows a significant change.[66] Partly it is higher because crops were good in 1982. But it is also showing the effects of very large absolute and relative increases in producer prices for agricultural commodies in late 1980 and 1981.[67]

These price increases may have had the effect of also raising the incomes of agricultural organizations to help them become capable of self-financing in the spirit of Romania's "new economic and financial mechanism." [68] However, this probably didn't account for increased investments. These were centrally directed and financed.

While central planners gave more investments they have not given agriculture a high priority in distributing supplies. The Economic Memorandum admitted that in 1982 fertilizer was exported rather than delivered to farmers as planned. It is also known that fuel shortages hindered the harvest and its collection in 1982 and 1983. Perhaps planners understood the risk of waste, given present organization in agriculture. In any case, nature was ready again in the winter of 1982 and the spring of 1983 to amplify any and all sources of neglect of the Romanian countryside.

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[63] Scinteia, 29 November 1981, and supplement to Revista economica, 1982:35 (on Law No. 1 of 1982. Also see RFER, Romanian SR/3, 11 February 1982, pp. 22–25.

[64] Revista economica 1983:30, p. 11; supplement to Revista economica, 1983:36; RFER, Romanian SR/13, 28 July 1983.

[65] See Jackson, "Romania's Economy at the End of the 1970's," p. 257.

[66] Also, it is now planned that the real growth of average peasant income will be 12.2 percent from 1980 to 1985 while average real wages will grow only 8 percent. Revista economica, 1983:48, p. 13. New forms of more highly differentiated pay have also been introduced. Revista economica, 1983:36, p. 10.

[67] Revista economica, 1983:15, p. 22. Implicit price deflators understate the price increase because of some increases in prices of inputs to agriculture. But they rose 18 percent in 1981 and 37 percent in 1982 compared to 0.5 percent and 15 percent inflation overall in NMP.

[68] According to the only evidence yet found, in the period 1976–1978, the value of material expenditures in current prices exceeded the gross output of animal products by 157 million lei annually! An attribution of labor cost would have raised the annual losses to about 3.2 billion lei. The state sector also made losses in animal production in 1978 with material expenditures (again not counting labor) exceeding the value of output by 620 million lei. Parpala, op. cit., p. 335.

B. The Impact on Economic Organization

Before the debt crisis Romania initiated two changes in organization which, combined in agriculture, seemed to hold out significant possibilities for improving the use of resources in the sector. One, limited to agriculture, was the establishment in 1979 of "unified agro-industrial councils." The councils' promise is that of improving the organization of Romania's agricultural cooperatives, clearly the weakest part of the sector.[69] The councils were recently reduced from 709 to about 550, giving them nearly the same land area on the average as a Bulgarian agro-industrial complex. But the councils in Romania seemed to have remained weak and underdeveloped units. Recently while explaining that organization was the major reasons for agriculture's plan failure in 1983, Ceausescu didn't even mention the councils, although he did specifically every other unit of organization in the sector.[70]

The real promise of the agro-industrial councils would be in combination with a much broader series of changes called a "new economic and financial mechanism," or NEFM. The NEFM was announced back in March, 1978 for implementation beginning 1979.[71] Just how fast it actually was remains a question; some of its features have not yet been fully applied or even may have been changed. The foreign debt crisis and the subsequent disorganization of resource allocations and finances has caused some delay. At the same time, the International Monetary Fund has pushed Romania into some price and exchange rate reforms which, while seeming in the spirit of the NEFM, have added to the uncertainty of organization.

The basic ideas of NEFM center on the ideas of "self-finance" (autofinanaciare) and "self-management" (autoconducerea), sometimes called "worker self-management" (autoconducerea muncitoreasca).[72] Self-finance has three degrees of meaning: (1) that enterprises and other units (now including cooperatives, communal and district people's councils, unified agro-industrial councils, and others) become aware of the economic value of their incomes and expenditures; (2) that effort be made to eliminate loss operations and find income sources to cover the costs of local services; and, (3) that surpluses of incomes over expenditures eventually provide the fixed and working capital available for a unit and funds for the state budget. Self-management means that working units at all levels, with participation of members, ought to arrive at and execute decisions desired and planned for them by the country's leaders and planners, but without being forced and pushed. The idea is better put by Ceausescu:

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[69] For a discussion of the councils, see Jackson, "Romania's Economy in the 1970s," p. 294, and RFER, Romanian SR/5, 30 March 1983.

[70] He also claimed a 20-million-ton grain harvest and good results in animal products and vegetable crops. Scinteia, 10 December 1983.

[71] Some useful background in English can be found in Alan Smith, "The Romanian Industrial Enterprise," in *The Industrial Enterprise in Eastern Europe*, edited by Ian Jeffries (Praeger: New York, 1981) pp. 63–82, and *RFER* Romanian SR/23, 27 December 1979, SR/11, 5 August 1980, and SR/14, 16 August 1983.

[72] Romanians also use *autogestiunea* which, according to one writer, has a broader social connotation while *autoconducerea* means direct worker participation in enterprise management. Gheorghe Sica, "Principiile autogestiunii in conditiile noulul mecanism economico-financiar," *Era Socialista*, 1983:12, p. 4.

> Self-management and economic self-administration must not be understood as each and everyone's right to engage and spend financial and human means, and to start activities as he thinks fit . . . We must understand that on developing self-management we should set out from the unified development plan . . . Working people's council's must debate both plan and budgets . . . controlling the achievements of production in the best conditions with utmost efficiency . . . working in this respect as representatives of the owners, producers, and end users, of the entire people. It is only in this capacity . . . that the working people's councils can and must fulfill their important role.[73]

In formal law as now defined, the "working people in the units" (or enterprises) are defined as the *proprietari* of the means of production, a word that might be translated as "proprietors," "owners," or merely "holders," and they must sign contracts to this effect.[74] Late in 1982 there was opened the possibility (or even obligation) of individual worker participation in the capital of enterprises. The deposits, as they are called, may not exceed 30 percent of the value of fixed assets, must remain a minimum of five years before withdrawn (and subject to enterprise means), transferred or inherited, and draw interest (a lower rate if the enterprise does not meet its plan).[75] As yet there are not statistics on their value.

In order to stimulate interest on appropriate kinds of self-management, wage funds were to be released to enterprises according to the degree of fulfillment of two plan indicators: (1) "net output," a measure of value-added including additions to inventories; and, (2) output of specific products in physical units, also as contracted. Not meeting these targets could result in wages and salaries falling to 80 percent of the stand or tariffed rates. A "fund for participation in profits" was to be set up and made larger or smaller by 1 percent of the wages fund. Also, it was to receive (1) up to 3 percent of planned profits if all main plan indicators were met, and (2) varible shares of over-plan profits, depending on the sources of such profit, as from cost reductions, exports, labor productivity, or physical outputs.

At the national level of plans and statistics for industry beginning in 1981, "net output" took the place of "gross output" and another indicator, "commodity production" or output of finished goods, was added. In the case of agriculture, "net output" was added to "gross output" as a second indicator. Nonetheless, this did not change the practice of formulating central and lower level plans in many indicators, including gross output, cost of production, labor productivity, profits and its division, new products and prices. Indicators probably have proliferated with the increasing number of special "national programs" to save on energy, recycle wasted materials, and more.

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[73] Scinteia, 14 June 1980 (cited in Smith, op. cit., p. 75).

[74] The contracts are required at all levels, from ministers on down in the recent law on the "contract-commitment" (lege cu privire la contractul-angajament). Romania libera, 2 July 1983, p. 4.

[75] The draft law, subsequently enacted, is in Scinteia, 12 October 1982. For a discussion in English, see RFER, Romanian SR/19, 12 November 1982.

Beginning on September 1, 1983 a system of remuneration based on piece rates, the *acord global,* has been expanded to all sectors of the economy and to as many levels and functions within each sector as possible. It is based on translating the standard or tariffed wage and salary rates per unit of time into an equivalent sum resulting from (1) a normative amount of output in physical units for that time, and (2) a normative payment per physical unit. From now on remuneration per person is to be a function of output in physical units per person, without lower or upper limits. Also, if an enterprise can meet its physical output plan with 10 percent fewer workers than the normal levels, then wages can be 10 percent higher per worker than tariffed rates. Enterprise managers are called upon to get rid of excess personnel. Ceausescu has said that even whole units may have to be shut down and employees reassigned.

The fund for participation in profits is kept and provided similar shares of planned and over-plan profits. But under the new system it will receive up to 3.5 percent of the wages fund for products used domestically and "over 4 percent" for exported products.[76]

Worth mentioning are several other aspects of the system affecting export incentives. Besides extra deductions of the wages fund to the fund for participation in profits, that fund will continue to receive part of over-plan profits due to exports. Also, as before, units earning over-plan foreign currencies can be given up to 2 percent of them for financing collective excursions abroad. There remains, in addition, foreign trade law No. 12, effective January 1, 1981, which provides that:

> Planned imports will be permitted only proportionally as planned export returns and payments are achieved or if export contracts ensure the necessary currency resources. In cases where such resources are not ensured, the ministries and other central local bodies, centrals and enterprises are obligated to re-establish the volume of imports according to the framework of planned currency balances.[77]

Since 1979 enterprises have been permitted higher profits on exports than on domestic deliveries, and even higher profits on over-plan exports in a system which permits rebates of part of the tax on net output. In general, profits are supposed to be limited to 5 percent on domestic deliveries. They were permitted to rise to 10 percent for planned exports and 20 percent for over-plan exports. The latter rates were raised to 15 and 25 percent in 1983.

Several conditions will temper the operations of NEFM under the piece-rate system of remuneration. One is the stability of norms for physical production. If the norms are to be re-established annually on the basis of planning, then the arrangement will maintain all the undesirable aspects of payment systems based on gross output indicators—hiding reserves by lower units, automatic tightening of norms by higher units, and others. It would be useful for the norms to be maintained over a several-year period. Even then, lower units will have incentives to overstate the amount of labor required in new products.

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[76] The basic law for the piece-rate system was published in Scinteia and Romania libera, 2 July 1983, with specific details of its application defined in a decree published in Scinteia, 17 September 1983. Both have details and variations for each sector of the economy which are not discussed here. Also, the normative acts spell out several complex formulas for personnel not (or not yet) on the piece rate. In industry, for example, regular wages are to be paid out according to the following proportions: 30 percent for the export plan, 25 percent for the physical output plan, 25 percent for the net output plan, and 20 percent for an indicator, "commodity output finished, sold and paid for." If a unit does not export, that weight is shifted to physical output.

[77] *Buletinual oficial,* No. 111, 24 December 1980, *Scinteia,* 19 August 1982, p. 2, and 22 April 1983; and *Revista economica,* 1983:40, p. 9.

That problem is part of the broader issue of the qualitative definition and control of all products. The system appears to maintain considerable incentive for lower units to (1) cheat on quality, and (2) vary the assortment of products whenever aggregate units are unavoidable in the definition of piece rates. One wonders, for example, if fastener factories are to have quality norms and piece rates for each and every size and kind of screw, bolt or nail. In any case, it will be important that monitoring by domestic users be improved; it is unclear how this will be done.

A third problem is how the system will define the wage per unit of output. The piece rate is no more than a price paid to the worker for a unit of output. Workers' incentives are bound to be influenced by relative piece rates. With whole enterprises and even higher units on piece rates, what is in question is no less than the whole system of producer prices.

Prices have been dramatically changed since 1980, both raised overall and shifted relatively. For example, at the beginning and again at the end of 1981, agricultural prices were raised nearly 30 percent at the producer level. Average producer prices in industry in the same period went up about 18 percent, with the increases concentrated in fuels, raw materials and items like chemical fertilizers. The new price system calls for planned price changes annually. Now more reseach is needed about how it works, how now products are to be priced, and how interim prices changes are to be made, especially those of exports and imports under the new arrangements for exchange rates.

An intention to adopt a "unified" exchange rate was part of the original NEFM program announced in 1978, but little was done until 1981 with the broader realignment of producer prices. Although the so-called "commercial" exchange rate has been changed several times since, the more important aspect of the new system has been the reduction of rates set for categories of exports and imports, and finally, on July 1, 1983, the claimed unification at 17.50 lei per U.S. dollar.[78] It remains to learn more about the present connection between internal and external prices under this arrangement. Probably many internal prices for exports, those paid to producers, are still fixed by domestic costs and normative profits (see the export incentives discussed above). On the other hand, most or all prices of imports are determined by the foreign price, the exhange rate and a relevant tariff.

How piece-rate norms and prices are to be managed are important in any case, no matter how much actual self-finance and self-management might be found in the Romanian economy. Self-finance has two dimensions. One is how much individual units cover operating costs out of self-generated revenues; the other is how much they cover investment costs from the same revenues or borrowed funds. Official Romanian sources claim that operating subsidies to enterprises have declined as a share of total state budget outlays, from 20 percent in 1980 to only 6 percent in 1982.[79] One assumes this reflects on the new price system.

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[78] At that time the lei was shifted from the dollar to a trade-weighted basket of currencies.

The share of fixed capital financed from the state budget was 55 percent in 1979. It fell to 45 percent in 1981 but went up to 50 percent in 1982, and is planned at only 40 percent in 1983. The division of remaining investment financing between bank credits and retained profits is not known. Given the recent price increases, real interest rates were negative in 1982 and may have been so again in 1983. This would not have stimulated workers depositing their capital funds, and would have pushed managers to use bank funds when possible. Besides, under the tax and price systems incorporated in 1979, any profit over 5 percent at the enterprise level on products delivered for domestic use was to be taxed into the state budget. That would leave little room for enterprise retained profits.

Self-financing of investments is not to be confused with self-management of the same, not if self-management means the enterprise or lower-level choice of how much and what kind of investments to make. It is clear since 1980 that central controls over investments have necessarily been tightened.[80] Such controls were incorporated in the investment law of 1980 and have been admitted by Romanian officials in the Economic Memorandum.

Elsewhere, a recent article on economic contracts said that they must be arranged by a "tight coordination among the enterprises and centrals who coordinate balances and the producing and benefiting enterprises, with the direct participation of specialists from the Ministry of Technical-Material Supplies and the State Planning Committee." [81] Documentation of tight central controls over foreign currency allocations since 1981 also would not be difficult to find. In these and other areas, self-managment has not meant decentralized decision making constrained by budgets and prices rather than central plans. But, then, it may never have been intended to do so.

V. CONCLUSIONS

In 1983 Romania was still making major adjustments to the pressure of having to generate large net export flows. Problems remained in the management of investment flows which was partly connected to the ability of the domestic machinery industry to substitute for a large decline in imports and to continue exporting large volumes. All sectors were under pressure of reduced energy supplies with coal production remaining a crucial balance. Food supplies remained tight with poor spring crops and possible growing net exports. If the domestic economy doesn't break under this pressure Romania might avoid a third rescheduling of debt service due in 1984. But so much has been put off to 1985 and beyond by the two previous reschedulings that the country plainly must operate in a squeeze for the rest of the decade. It would be wise for the country to seek stable allocations under such conditions rather than risk trying to do too much too soon.

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[79] Self-financing is being pushed in communes and towns. Recently one communal council reported that the share of its activities financed from production on public gardens and otherwise wastelands had gone up from 18 percent in 1979 to almost 54 percent in 1982. But this is unlikely to be a representative case. Scinteia, 5 February 1983.

[80] *RFER*, Romanian SR/14, 16 August 1983, p. 15, cites a statement by economist N. N. Constantinescu of the temporary limitations on the right of self-financing because of excessive unfinished projects (from Era Socialista, 1983:5).

[81] Revista economica, 1983:15 p. 6.

President Ceausescu's push to reduce debt balances by half at the end of 1985 and to pay off all the rest by 1988 could be just so much mobilization babbling. One may hope so for what he wants not only has no useful economic purpose. It seems mainly aimed at old xenophobias and to further enhance Ceausescu's independence. Also, it carries a grave risk of pushing the economy too far, even to a point where exports decline faster than do imports, an implosion of declining trade causing declining domestic production.

A restrained set of adjustments also would be useful in order to create the stable environment needed for more efficient organization under a really functional NEFM. Again, questions about leadership preferences are raised. There is no evidence that Ceausescu wants effective decentralization if for no other reason than decentralization, even in economics, contradicts his style. He and those around him prefer mobilization, mass (and expensive) meetings of party and management cadres to hear an endless stream of "new programs" of resource allocation. The leadership style seems doomed to always justify itself. It generates the problems for which it finds solutions. Under it, the Romanian economy is always in a state of urgency.

ANNEX TABLE 1.—ROMANIA: TRADE, PAYMENTS AND DEBT BALANCES IN CONVERTIBLE CURRENCIES

	Exports fob (1)	Imports fob (2)	Trade balance (3)	Current balance (4)	Gross debt (5)	Net debt (6)	Percent change in: Exports (7)	Percent change in: Imports (8)	Change in: Trade balance (9)	Change in: Current balance (10)
Years:										
1975	2,839	2,950	−111	−149						
1976	3,403	3,327	76	−61	2,812		+19.9	+12.8	+187	+88
1977	3,700	3,783	−83	−273	3,583		+8.7	+13.7	−159	−212
1978	4,040	4,632	−592	−779	5,074		+9.2	+22.4	−509	−506
1979	5,363	6,578	−1,155	−1,668	7,173		+32.7	+40.7	−563	−889
1980	6,503	8,037	−1,534	−2,399	9,557		+21.3	+23.3	−379	−731
1981	7,216	7,012	−204	−818	10,160	9,757	+11.0	−12.8	+1,330	+1,581
1982 [1]	7,600	7,050	550	−450			+5.3	+0.5		
1983 [1]	8,590	7,500	1,000	0			+11.8	+6.4		
1984 [1]	9,300	7,900	1,400	400			+9.4	+5.3		
1982	6,235	4,710	1,525	655	9,766	9,317	−13.6	−32.8	+1,321	+1,473
1983 [2]	6,600	5,000	1,600	800			+5.6	+6.2		
1984 [2]	7,000	5,300	1,700	870			+6.1	+6.0		
1985 [2]	7,500	5,650	1,850	970			+7.1	+6.6		
1982 [3]	3,225	2,623	602	164	10,073		−13.4	−37.0	+1,039	+1,037
1983 [3]	2,952	2,241	711	426	9,226		−8.5	−14.6	+109	+262

[1] As forecast in May 1982.

[2] As forecast in February 1983.

[3] First half compared to same period in previous years.

Sources: IMF, IFS; Romanian Economic Memorandum (May 1982) and (February 1983); Jan Vanous, Wharton CPE/CA, 111: 65–66 (August 31, 1983) and III: 75 (September 23, 1983).

ANNEX TABLE 2.—ROMANIA: TRADE, PAYMENTS AND DEBT BALANCES IN NONCONVERTIBLE CURRENCIES

	Exports fob (1)	Imports fob (2)	Trade balance (3)	Current balance (4)	Gross debt (5)	Percent change in: Exports (6)	Percent change in: Imports (7)
Years:							
1975	2,502	2,392	+110	+14			
1976	2,731	2,760	−29	+45	64	+9.2	+15.4
1977	3,159	3,220	−41	+27	102	+15.7	+16.7
1978	3,982	3,996	−14	+20	96	+26.1	+24.1
1979	3,940	3,941	−1	+15	169	−1.1	−1.4
1980	4,521	4,648	−127	−27	253	+14.7	+17.9
1981	5,151	5,252	−101	−15	386	+13.9	+13.0
1982 [1]	6,100	6,300	−200	−115		+18.4	+20.0
1983 [2]	6,950	7,100	−150	−140		+13.9	+12.7
1984 [3]	7,700	7,850	−150	−150		+10.8	+10.7
1982 [1]	5,324	5,035	+289	+385	203	+3.5	−4.1
1983 [2]	5,900	6,050	−150	−66		+10.8	+20.2
1984 [3]	6,300	6,350	−50	+45		+6.8	+5.0
1985 [1]	6,900	7,000	−100	+17		+9.5	+10.2
1982 [2]	2,558	2,646	−88	−45		+11.6	+4.8
1983 [3]	2,612	2,383	229	242		+2.1	−9.9

[1] As forecast in May 1982.
[2] As forecast in February 1983.
[3] First half of each year compared to previous first half.

Sources: IMF. IFS; Romanian Economic Memorandum (May 1982) and (February 1983); Jan Vanous, Wharton CPE/CA, III: 65–66 (August 31, 1983) and III: 75 (September 23, 1983).

ANNEX TABLE 3.—ROMANIA: CHANGES IN REAL NATIONAL PRODUCT USED

	GDP		Consumption				Investment				
					Materials						
	Produced	Used	Total	Services	Personal	Collective	Total	Change in inventories	Net fixed capital	Depreciation	Gross fixed capital
I. Billion lei in 1977 prices:											
1975	$428.4	$428.1	$261.6	$30.2	$202.9	$28.5	$166.5	$25.1	$100.5	$40.4	$140.9
1976	477.3	480.9	285.2	33.5	217.7	34.0	195.7	42.8	106.5	46.1	152.6
1977	513.1	509.6	306.0	34.7	235.8	35.5	203.6	32.4	124.5	46.4	170.9
1978	554.1	559.3	334.1	37.4	258.6	38.1	225.2	26.8	146.0	51.9	197.9
1979	590.7	592.8	356.2	40.7	273.0	42.5	236.6	30.1	149.5	57.0	206.5
1980	610.2	602.5	367.8	41.7	283.4	42.7	234.7	22.7	150.3	61.7	212.0
1981	626.8	579.8	377.7	41.5	293.8	42.5	202.1	5.1	129.5	67.4	196.9
1982	646.7	574.0	373.2	42.0	288.2	43.0	200.8	9.2	117.1	74.5	191.6
1983	671.3	579.2	376.9	42.0	291.9	43.0	202.3	9.4	113.7	79.2	192.9
II. Annual percentage change:											
1976	+11.4	+12.3	9.0	10.4	7.3	+19.3	+17.5	+70.6	+6.0	+14.1	8.3
1977	+7.5	+6.0	7.3	3.4	8.3	+4.4	+4.0	−24.3	+16.9	+.7	12.0
1978	+8.0	+9.8	9.2	7.9	9.7	+7.3	+10.6	−17.3	+17.3	+11.9	15.8
1979	+6.6	+6.0	6.6	8.2	5.6	+11.5	+4.1	+12.3	+2.4	+9.8	4.1
1980	+3.3	+1.6	3.3	2.5	3.8	+.5	−.9	−24.6	+.5	+8.2	2.6
1981	+2.7	−3.8	2.7	−.5	3.7	−.5	−13.9	−77.5	−13.8	+9.2	−7.1
1982	+3.2	−1.0	−1.2	1.1	−1.9	+1.2	−.7	+80.4	−9.6	+10.5	−2.7
1983	+3.8	+.9	1.0	.0	+1.3	.0	+.7	+2.2	−2.9	+6.3	.7

Sources: Calculated by the author from sources indicated in Annex Table 1 and other official Romanian data.

YUGOSLAVIA

YUGOSLAV ECONOMIC PERFORMANCE IN THE 1980'S: ALTERNATIVE SCENARIOS*

By Sherman Robinson,** Laura D. Tyson,** and Mathias Dewatripont***

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ABSTRACT

This paper utilizes a multisector, computable general equilibrium (CGE) model to analyze Yugoslav economic performance during the 1981-1990 period. The model is used to generate both counterfactual historical simulations for the 1981-1984 period and alternative forward-run scenarios for the 1984-1990 period. The counterfactual simulations assess the relative contribution of domestic policy errors and adverse changes in external trade and credit market conditions on deteriorating economic performance between 1981 and 1984. These simulations illustrate the impact of the growing foreign exchange crisis on domestic growth and productivity performance.

The forward-run scenarios examine growth and debt repayment prospects during the 1984-1990 period on the assumption that Yugoslavia will successfully implement a change in development strategy toward a more open economy with increased exports. The new development strategy is assumed to be realized by an appropriate exchange rate policy that eliminates the excess demand for

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foreign exchange and the complicated rationing schemes it has engendered. As a result, the bias in incentives against exports is removed, and both export and productivity performance improve. The forward runs also assume that Yugoslavia will maintain austerity measures to control domestic absorption, especially aggregate investment, throughout the 1984–1990 period. Alternative simulations analyze the implications of differences in the severity and composition of such measures for economic performance. The results illustrate the tradeoffs between the growth of domestic investment and real wages on the one hand and the balance of payments and debt repayment on the other.

I. INTRODUCTION

In the last decade, the Yugoslav economy has undergone a number of shocks. There have been major changes in both domestic policy, including major institutional reforms, and shifts in the world economy, including oil price inceases and worldwide recession. Since about 1979, problems with foreign trade have dominated policy discussions as economic performance has become steadily more constrained by shortages of foreign exchange. Until quite recently, the Yugoslav response to foreign exchange shortages was to impose increasingly severe rationing of imports. Now, however, they are considering ways to increase exports and to implement what is essentially a shift in development strategy. Policy debate is currently intense and centers on issues of moving toward a more open economy, with more reliance on market incentives, and removing the severe bias in incentives against exports that has characterized the system over the past decade.

The policy debate in Yugoslavia has parallels in many other countries. To what extent are their problems due to external conditions beyond their control, and to what extent are they due to failures in domestic policy? Given the variety and severity of the shocks the economy has faced, what are the best policies to pursue in the 1980s? In this paper we seek to analyze these questions within the framework of a multisector, computable general equilibrium (CGE) model of the Yugoslav economy. Such models have been used to analyze issues of structural adjustment in other countries.[1] The framework is useful because it permits analysis with an empirical model that explicitly incorporates structural relationships among many sectors and market interactions between producers and demanders.

In a separate paper we have used the model to analyze Yugoslav performance in the 1976–1980 period.[2] In that paper we concluded that, while external shocks were important, the policy response within Yugoslavia was inadequate for dealing with the problems which emerged during this period. Resorting to quantitative restrictions on imports led to serious distortions in the domestic market, especially large biases in incentives against exporters, underutilization of capacity, and losses in efficiency. Between 1978 and 1981, the second oil crisis hit, international interest rates rose, and the world recession hurt export markets. The Yugoslav response to these events was, again, inadequate and created a complicated and confused incentive structure that persists to the present.

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[1] See, for example, Dervis and Robinson [1982] and Dixon et al. [1981]. Dervis, de Melo, and Robinson [1982] survey the use of CGE models in developing countries.

[2] See Robinson and Tyson [1983].

In this paper we take up the story in 1981. We first analyze the course of the economy in the 1981–1984 period and then consider different medium-term scenarios for the 1984–1990 period. In the next section, we describe the CGE model which we used for the analysis. The discussion is very brief, focusing only on the essential features of the model. More detailed descriptions, including specification of equations, are available elsewhere.[3] In the succeeding sections, we use the model to generate various counterfactual historical simulations and alternative forward simulations which explore the economic trade-offs that have faced, and will face, Yugoslav policymakers.

II. The CGE Model

The CGE model for Yugoslavia, like CGE models implemented for other developing countries, operates by simulating the operation of markets for factors, products, and foreign exchange. The model is highly nonlinear and involves the specification of conditions of supply and demand for all the markets. A solution for a given year generates market-clearing prices and quantities, including all the elements comprising the circular flow in the economy. The Yugoslavia model has 18 production sectors; 4 labor categories; 2 household types (rural and urban); and enterprises differentiated by sector, government, a "rest of the world" institution, and an aggregate capital account which serves the role of the banking system in gathering savings and allocating investment funds to sectors. Depending on how one counts, the model has around 1,000 to 1,500 equations which are solved for each period in a dynamic simulation.

The emphasis on markets and market-clearing mechanisms in the CGE model reflects the view that the independent behavior of decentralized producers and consumers plays a significant role in influencing economic performance. However, this view of the economy does not imply that markets are perfect or that the decision making of producers and consumers is necessarily guided by neoclassical rules of profit maximization or utility maximization. Instead, the Yugoslavia model explicitly recognizes the existence of rigidities and imperfections in the economy and of special behavioral features of self-managed enterprises.

A. Production and Employment

In most CGE models, it is assumed that producers maximize profits given a neoclassical production technology in an environment of perfectly competitive markets. In the Yugoslavia CGE model, the assumption of profit maximization is replaced by a set of rules that attempts to capture the behavior of self-managed firms. The specification incorporates two basic features of such behavior: (1) rigidities in employment levels that limit the supply responsiveness of the firm to changes in product market conditions, and (2) payment rules that produce a divergence between the marginal value product of labor and the personal income or wage that labor receives.

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[3] See World Bank [1983], Methodological Annex, pp. 301–334.

We assume that output decisions of self-managed firms are guided by a form of constrained profit maximization. Firms are assumed to treat a portion of their labor force as fixed in the short term, analogous to sectoral capital which is also assumed to be imobile in the short run. Decisions on the amount of variable labor to be used in a given period are guided by a "planning" or "accounting" wage. Distinguishing between variable and fixed labor has the effect in the model of reducing the employment variability and sectoral supply responsiveness relative to what they would be in a world of perfect factor mobility and unconstrained profit maximization.

The model of firm behavior distinguishes between the planning wage that a firm uses in deciding the level of labor utilization and the actual personal income paid to members of the firm. Income payments can be seen as consisting of two parts: a planning wage component and a component that reflects the worker's share in the firm's net income. The size of the second component depends on both the legal and contractural obligations affecting the distribution of enterprise income and on the firm's decision as to what part of its disposable net income should be distributed to workers. In the model, these shares are set by various coefficients which can either be fixed or determined endogenously in response to policy choices. The variation of these distribution shares in response to government policy is an important feature of the Yugoslav institutional system and of the forward simulations with the model (discussed further below).

B. Foreign Trade

Exports are treated in two different ways in the version of the model used here. For the counterfactual experiments, exports are exogenous and are varied parametrically to explore the impact of different scenarios. In the forward simulations, exports are determined endogenously. For each sector, the model includes separate world demand functions and domestic export supply functions (the latter specifies the enterprise's decision to sell on the world market rather than on the domestic market).

On the import side, the model assumes that domestically produced goods and imports are imperfect substitutes. Elasticities of substitution vary across sectors, with the lowest elasticities in raw material and capital goods sectors. Given this specification, the demand for imports depends on the relative price in the domestic market of domestically produced and imported goods. The world price of imports is assumed fixed (the "small country" assumption); but their price in the domestic market depends on the exchange rate, tariffs, and premia, if any. Thus, trade policy will have an important effect on import demand. The relative importance of these factors in determining domestic prices and demand depends on the relative shares of imports and exports in total domestic supply as well as on the trade substitution elasticities.

The total demand for foreign exchange in the model is determined by summing desired imports across all sectors. The total is compared with the supply of foreign exchange arising from exports and net foreign capital inflows (including remittances and reserve decumulation). An adjustment mechanism must be specified to equate the supply and demand for foreign exchange. There are two versions used for the simulations. In the counterfactual experiments for the 1981–1984 period, the model uses an endogenous mechanism of import rationing which is intended to capture in a stylized manner the elaborate foreign exchange rationing system that the Yugoslavs have built up over the past few years. The mechanism and its implications for economic performance are discussed further below. In the forward simulations, we assume that this complicated and distorting system of rationing is eliminated. Instead, the model assumes that Yugoslavia will pursue an exchange rate policy which is designed to keep the real exchange rate roughly constant (for example, a "crawling peg" policy), and then capital inflows will adjust to clear the foreign exchange market.

C. Demand, Prices, and Macro Closure

The demand side of the model works by tracing through the incomes generated in the productive sectors of the economy and the various demands they induce. There are three categories of income recipients whose behavior is modeled: productive enterprises, households, and the government (or non-productive sector). The model contains an elaborate set of accounting and behavioral rules to determine how value added (or factor income) is distributed among income recipients.[4] To complete the circular flow, the saving and expenditure behavior of each income recipient is specified, leading to demands for sectoral output for consumption and investment purposes. The problem of achieving macroeconomic savings-investment balance is a separate issue involving what has come to be called the macro "closure" of the model.

There are a variety of ways discussed in the literature for achieving savings-investment equilibrium in CGE models. Different approaches are based on different theoretical views of how the macro system works: neoclassical, Keynesian, monetarist, Kaldorian, "structuralist," etc., with many variations and combinations.[5] In the Yugoslavia model, we use different specifications for the counterfactual simulations and the forward simulations. In the counterfactual simulations, the model is run with neoclassical closure. Investment is determined by the sum of savings from all sources: enterprises, government, households, and foreign or rest of the world. The institutional savings rates, as well as the aggregate price level and the nominal exchange rate, are all exogenous. Some of these parameters are varied in the counterfactual simulations as part of the alternative scenarios. In the forward simulations, we specify a different macro story which is designed to reflect the particular institutional framework in Yugoslavia. In this specification, inflation is endogenous and nominal personal incomes (or wages) are treated as exogenous. The details are discussed below when we present the forward simulations.

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[4] These rules are described in detail in World Bank [1983].

[5] For further discussion of issues of macro closure, see Taylor [1983] and Robinson and Tyson [1984].

III. EXTERNAL CONDITIONS AND ECONOMIC PERFORMANCE, 1981-1984

As a result of outstanding debt repayment requirements, coupled with poor export performance, Yugoslavia was forced to strengthen its domestic austerity program in 1982-83 in order to cut imports. In 1982 and 1983, had Yugoslavia been able to export more, or to borrow more (or, equivalently, to pay back less), a smaller dose of austerity would have been possible and the performance of the economy would have been better. To a large degree, domestic policy errors were responsible for Yugoslavia's difficulties. In particular, the persistence of an overvalued dinar exchange rate and import rationing schemes produced a bias in incentives against exports that has played a major role in Yugoslavia's poor export growth since the mid-1970s.[6] Nonetheless, Yugoslavia's 1982-83 economic difficulties were not all of its own making. Like other net-debtor, newly industrializing countries, Yugoslavia was adversely affected by two changes in its external economic environment: (1) a sharp slowdown in the growth of its export markets and (2) a tightening of external credit market conditions.

In this section, we discuss the results of simulations of the CGE model designed to assess the impact of these changes on the Yugoslav economy. All the simulations begin in 1981, the base period for the current version of the CGE model. The first simulation (the base run) reproduces the actual course of the Yugoslav economy in 1982 and 1983—consistent with information available at the time the simulation was completed (August, 1983)—and produces a projection for 1984. The 1984 projection, in turn, depends on a number of endogenous variables whose values are determined by 1982-83 history and on a number of exogenous variables whose values are based on various Yugoslav and World Bank estimates.

The base run scenario depends on a number of behavioral assumptions about the functioning of the Yugoslav economy and also on assumptions about external conditions confronting it. For the purposes of this paper, the most important behavioral assumptions regarding the domestic economy concern the effects of a foreign exchange shortage. The base run simulation takes the supply of foreign exchange and the exchange rate as given in each year. The 1982-83 values for the supply of foreign exchange are based on actual historical values for export earnings, net remittances, net foreign capital flows, and reserve accumulation (decumulation). The 1984 values for these exogenous variables are based on projections as of summer 1983. The 1982 dinar-dollar exchange rate is set at its actual period average value. The 1983 period average exchange rate is set on the assumption that the Yugoslavs maintain the 22 percent real devaluation realized during the first half of 1983 by a combination of internal stabilization measures and further exchange rate adjustments through the end of the year. For 1984, it is assumed that the Yugoslavs will continue to maintain a constant price level deflated exchange rate. Therefore, the period average dinar-dollar exchange rate in nominal terms is projected to depreciate just enough to offset the projected differential between Yugoslav and world inflation rates.

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[6] For a discussion of the extent of dinar overvaluation and the bias against exports, see Robinson and Tyson [1983].

Given the exchange rate, the demand for foreign exchange is determined endogenously in the model for each year by summing desired imports across all sectors. In 1982 and 1983, the model results indicate continued substantial excess demand for foreign exchange, given the actual exchange rate policy in those two years. The projection for 1984 is for more of the same, although the actual extent of excess demand is expected to decline, primarily as a result of improved export earnings.

In the presence of excess demand for foreign exchange, the Yugoslavs have relied on a complicated set of rationing rules to allocate the available supply among competing users. The CGE model contains an elaborate specification of how these rules operate and captures their effects on real economic performance in several ways.[7] First, would-be importers who are unable to import all that they desire are forced to substitute domestic goods. Since most imports are intermediate inputs into the production process and since domestic goods are difficult to substitute for imported goods, a shortage of foreign exchange has a direct real effect on domestic output and growth. Second, the model reflects the fact that import rationing schemes cause uncertainties and interruptions in the flow of crucial imports to domestic users with consequent disruptions in domestic production and growth. The model captures these second effects in its assumptions about the exogenous rate of growth of total factor productivity. For 1982 and 1983, the rates of total factor productivity growth are actually negative (−4.0 and −2.0 percent in manufacturing, respectively) reflecting the sharp slowdown in domestic output that occurred, despite continued growth in both labor and capital inputs. The rate of total factor productivity growth is expected to remain negative through 1984 (at −2.0 percent a year).

Finally, the model assumes that there are real output costs associated with the rent-seeking activities engendered by Yugoslavia's import rationing mechanisms. The existence of substantial unsatisfied demand for foreign exchange implies the existence of substantial scarcity or rental income, which provides powerful incentives for "rent seeking" behavior as would-be importers seek access, through nonmarket means, to foreign exchange at the overvalued official exchange rate. Such rent-seeking behavior generates real costs as resources that might otherwise be used in production are diverted to rent-seeking activities.[8] In the Yugoslav institutional setting, these activities include such things as enterprise lobbying for import allocations in communities of interest, negotiating complex hidden arrangements for the sale of foreign exchange at a premium rate among enterprises, and political lobbying to restrict the flow of foreign exchange across regional boundaries. The CGE model assumes that these activities waste domestic resources and reduce output.

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[7] For more discussion of the workings of the rationing rules in the CGE model, see Robinson and Tyson [1983] and World Bank [1983].

[8] See Krueger [1974] for a discussion of the theory of rent seeking.

The effects of the actual 1982–83 foreign exchange shortages and the projected 1984 shortage are apparent in the 1981–1984 growth rates generated in the base run simulation, which are given in Table 1. The base run results show an average annual growth rate of 1.4 percent for gross domestic product (GDP), 1.6 percent for personal consumption, and −2.3 percent for gross fixed investment. These growth rates are dramatically lower than the average annual growth rates of 5.9 percent for GDP, 7.2 percent for private consumption, and 6.1 percent for gross fixed investment realized in the 1976–1980 period; and they are lower still than comparable rates for the 1971–1975 period.[9]

TABLE 1.—COUNTERFACTUAL SIMULATIONS: GROWTH RATES, 1981–84

[In percent]

Variable[1]	Simulation		
	Base run	C–1	C–2
Gross domestic product	1.4	3.1	3.6
Private consumption	1.6	3.4	3.4
Gross fixed investment	−2.3	2.2	1.3
Exports	2.0	2.0	6.4
Imports	−1.3	2.3	2.6
Real wage, manufacturing	−1.1	0.2	0.7

[1] Exports and imports include services. All variables are in real terms (1981 prices).

To assess the impact of adverse changes in external trade and capital market conditions on Yugoslav economic performance during the 1981–1984 period, the results of the base run simulation can be compared with the results of appropriately specified counterfactual simulations. In the first counterfactual simulation, called C–1, we assume a relaxation of capital market constraints that allows Yugoslavia to increase its net foreign borrowing to reduce sharply import rationing in 1982 and 1983 and to eliminate rationing altogether by 1984. In addition to increasing borrowing, simulation C–1 assumes that the relaxation of the foreign exchange constraint and the concomitant increase in crucial imports would lead to an increase in total factor productivity growth of one percentage point a year in the nonagricultural sectors. All other assumptions are the same as in the base run.

Table 2 presents cumulative trade flows and balance of trade figures for the simulations, and Table 3 presents various macro variables for 1984. To achieve the objective of eliminating import rationing by 1984, the model results indicate the need for additional net cumulative borrowing of $5.1 billion between 1982 and 1984. The substantial increase in borrowing required to eliminate the excess demand for foreign exchange by 1984, even with a major real devaluation in 1983 and a projected improvement in export growth in 1984, attests to the severity of the foreign exchange crisis during the 1982–83 period.

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[9] See World Bank [1983], p. 362.

TABLE 2.—COUNTERFACTUAL SIMULATIONS: CUMULATIVE TRADE FLOWS, 1982–84

[Billions of current dollars]

Variable	Simulation		
	Base run	C–1	C–2
Exports	47.89	47.89	53.24
Imports	45.70	50.79	52.50
Balance of trade	2.19	−2.90	0.74

TABLE 3.—COUNTERFACTUAL SIMULATIONS: SELECTED MACRO VARIABLES, 1984

[In percent]

Variable [1]	Simulation		
	Base run	C–1	C–2
Private consumption/gross domestic product	53.5	53.7	53.6
Fixed investment/gross domestic product	24.0	26.8	23.5
Exports/gross domestic product	27.7	26.3	29.5
Imports/gross domestic product	26.3	27.9	27.7
Foreign savings/total savings	−4.8	5.1	−6.3
Enterprise savings/total savings [2]	54.0	48.6	54.7
Government savings/total savings	19.3	17.8	19.9
Enterprise savings/value added [2]	18.2	17.9	17.9
Real wage index (1981=100) [3]	96.6	100.6	102.1

[1] National accounts ratios are of magnitudes in current domestic prices.
[2] Economywide, including agriculture and services.
[3] In manufacturing.

Reflecting the model's treatment of the direct and indirect costs of a foreign exchange shortage and the rationing mechanisms it sets in motion, the C–1 simulation indicates the effects of the additional borrowing on Yugoslav economic performance. The simulation results show 1981–1984 growth rates of 3.1 percent for GDP, 3.4 percent for private consumption, and 2.2 percent for gross fixed investment (Table 1). Even with substantial additional borrowing, aggregate growth rates remain much lower than those realized in the 1970s. This is, in part, the result of the projected slow growth in investment, albeit at a positive rate, in the C–1 simulation. Equally important, however, are the assumptions about total factor productivity which is projected to continue to decline during the period, although at slower rates than in the base run. While an improvement over the base run, these assumptions are, nonetheless, very conservative in that total factor productivity is not assumed to increase in the short run at rates realized in the 1970s. The fundamental underlying assumption is that past disruptions and continued nonmarket administrative interventions in the economy would prevent realization of improvements in efficiency, even if the shortage of intermediate imports had been relaxed.[10]

Although the C–1 simulation indicates that Yugoslavia would have been able to grow more rapidly in the 1981–1984 period if it had been able to borrow more, it says nothing about the wisdom of such a borrowing strategy. Additional external loans during this period would have added to Yugoslavia's debt-servicing problems in the future, and a prudent borrowing strategy would have required a comparison of the real cost of external funds with the expected real benefits from their use. The C-1 simulation is instructive, nonetheless, because it gives an idea of the growth-borrowing trade-off that confronted Yugoslav policymakers during the 1981-1984 period.

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[10] See Nishimizu and Page [1982], who have measured total factor productivity growth by sectors and regions in Yugoslavia, and discuss reasons why productivity growth has been so slow there; see also World Bank [1983].

A comparison of the additional borrowing in the C-1 simulation with an estimate of Yugoslavia's cumulative interest payments in 1982 and 1983 also suggests the effects on the Yugoslav economy of the shortening of maturities and the climb in interest rates in international capital markets. Yugoslavia paid an estimated $2.1 billion in interest in 1982 and is projected to pay about the same amount in 1983. Relative to the outstanding stock of debt, these figures convert to an effective interest burden of about 12 percent in both years. Similar figures for the 1979-80 period indicate that interest payments were only 6.5 percent of the outstanding stock of debt in those years. If, in the absence of worsening credit market conditions, Yugoslavia had been able to maintain the same relationship between interest payments and debt in the 1982-83 period, its interest payments would have amounted to about $2.3 billion. Seen from this vantage point, about half of the additional funds that would have been required for Yugoslavia to eliminate its foreign exchange shortage by 1984 can be attributed to the effects of deteriorating conditions in external credit markets.

In the second counterfactual simulation, called C-2, we assume that Yugoslav exports grew at an average annual rate of 6.4 percent in 1982 and 1983. Such performance implies a reasonable (nonrecessionary) growth in world trade and assumes that Yugoslavia would have been able to maintain its share in world markets. This performance is in sharp contrast to the base run in which the world recession leads to no projected growth in world trade in 1982 and 1983 and only very slow growth of Yugoslav exports (2 percent a year). We also assume, as in C-1, that the Yugoslavs would have been able to borrow any additional funds required to eliminate their foreign exchange shortage by 1984 under these more optimistic export earning assumptions.

In addition, in simulation C-2, we assume a further increase in total factor productivity growth of one percentage point a year in the nonagricultural sectors (yielding rates of −2.0, 0.0, and 0.0 percent for 1982, 1983, and 1984, respectively). This latter assumption reflects the view that increased exports would have improved productivity through a combination of better resource allocation and, implicitly, a lessening of administrative interference in market incentives. Thus, the scenario does not involve just an improvement of world market conditions for Yugoslav exports but also assumes a Yugoslav response to the improved export opportunities.

The results presented in Table 2 indicate that the more rapid export growth in simulation C-2 yields additional cumulative export earnings of $5.35 billion between 1982 and 1984 and that additional cumulative foreign borrowing of $1.45 billion would have been needed in the same period—all compared to the base run. The GDP growth is better in simulation C-2, but consumption growth is the same as in C-1 and investment growth is lower (Table 1). The reason for this mixed aggregate performance is that the increased export earnings are used partly to offset the increased borrowing generated in simulation C-1. Simulation C-2 yields $3.64 billion less in cumulative net borrowing, compared to C-1, which represents about 6 percent of GDP in 1984.

Once again, the results attest to the severity of the foreign exchange constraints facing Yugoslavia in the 1981-1984 period. In the C-2 scenario, Yugoslavia is able to reduce the constraint through both additional export earnings and additional borrowing. This is a preferable solution compared to the pure borrowing scenario of the C-1 simulation because it implies a smaller debt-servicing burden in the future.

Table 3 provides some macro indicators for 1984 for the base run and the two counterfactual simulations. As one would expect, the higher borrowing simulation (C-1) increases total investment and the share of foreign savings in total savings. The higher export simulation (C-2) leads to roughly the same investment share in GDP as in the base run and a similar structure of savings. Manufacturing real wages are also highest in this simulation, as would be expected with a significant increase in manufactured exports.

Finally, it is important to note that a comparison of the C-2 results with the base run simulation provides only a rough estimate of the cumulative effects of adverse changes in external credit and trade conditions on the Yugoslav economy between 1981 and 1984. The comparison undoubtedly overstates these external effects because the C-1 simulation implicitly assumes that Yugoslavia's actual export performance in 1982-83 was largely the result of adverse external conditions. In fact, an overvalued dinar and other domestic policies that produced a bias in incentives against exports played a large role. The counterfactual simulations are optimistic in that they assume that Yugoslav exporters would have been able to respond to the improvement in export opportunities.

IV. ALTERNATIVE POLICY REGIMES AND MACRO PROJECTIONS, 1983-1990

In making future projections of Yugoslav performance, it is necessary to project the policy choices that will be implemented. In this section we explore the implications of a variety of scenarios, focusing on the trade-offs among different constraints and macroeconomic policies. In all these experiments, we start from the assumption that Yugoslavia will implement successfully a change in development strategy toward a more open economy with increased exports. Also, we assume gradually improving world conditions, especially with regard to Yugoslav export markets. Tables 4 to 6 give the results.

TABLE 4.—FORWARD SIMULATIONS: GROWTH RATES, 1983-84 AND 1984-90

[In percent]

Variable[1]	Simulation			
	F-1	F-2	F-3	F-4
Growth rates (1983-84):				
Gross domestic product	2.9	2.3	2.0	2.9

TABLE 4.—FORWARD SIMULATIONS: GROWTH RATES, 1983–84 AND 1984–90—Continued

[In percent]

Variable [1]	Simulation			
	F–1	F–2	F–3	F–4
Private consumption	2.7	4.3	3.0	3.5
Gross fixed investment	0.4	−10.6	−11.1	−10.0
Exports	8.0	9.2	10.1	11.2
Imports	6.3	2.3	0.5	1.0
Nominal wage, manufacturing	26.2	25.5	20.8	20.9
Real wage, manufacturing	0.6	3.0	1.8	2.3
Gross domestic product deflator	25.6	20.4	17.7	17.1
Growth rates (1984–90):				
Gross domestic product	4.1	3.8	3.8	4.4
Private consumption	3.5	3.3	2.8	3.2
Gross fixed investment	3.6	3.0	3.0	3.5
Exports	6.3	6.3	6.7	7.6
Imports	3.9	3.9	3.7	4.1
Nominal wage, manufacturing	17.5	17.5	16.7	16.9
Real wage, manufacturing	1.3	1.1	0.6	1.0
Gross domestic product deflator	15.3	15.5	15.4	15.0

[1] National accounts variables are in real terms (1981 prices).

TABLE 5.—FORWARD SIMULATIONS: AVERAGE ANNUAL TRADE FLOWS, 1984–90

[In billions of dollars]

Variable	Simulation			
	F–1	F–2	F–3	F–4
Exports	25.22	26.61	27.11	28.06
Imports	22.91	22.08	21.49	21.95
Balance of trade	2.31	4.53	5.62	6.11
Cumulative borrowing differential [1]	0.00	−15.54	−23.17	−26.60

[1] Total difference in the cumulative balance of trade over the seven-year period from simulation F–1.

TABLE 6.—FORWARD SIMULATIONS: SELECTED INDICATORS, 1990

Variable [1]	Simulation			
	F–1	F–2	F–3	F–4
Indices (1983=100):				
Gross domestic product	130.9	128.3	127.6	133.6
Private consumption	126.1	126.5	121.7	125.0
Capital stock	146.1	141.3	141.0	141.9
Real wage, manufacturing	108.6	110.1	105.6	108.4
Gross domestic product deflator	293.9	286.4	277.2	270.7
Ratios (percent): [2]				
Private consumption/gross domestic product	53.1	54.9	52.7	51.8
Fixed investment/gross domestic product	22.9	19.2	19.3	19.2
Exports/gross domestic product	34.0	36.1	38.5	39.8
Imports/gross domestic product	28.7	28.8	29.1	29.3
Foreign savings/total savings	−19.3	−30.4	−39.1	−43.4
Enterprise savings/total savings [3]	48.3	46.5	56.3	61.4
Government savings/total savings [3]	28.4	32.8	32.5	32.4
Enterprise savings/value added [3]	15.0	12.6	15.3	16.7

[1] National accounts variables are in real terms (1981 prices).
[2] National accounts variables are in current domestic prices.
[3] Economywide, including agriculture and services.

In the first experiment (F–1), the change in development strategy is modeled by assuming that policymakers quickly remove the historical bias in incentives against exports. After the large real devaluation in 1983, it is assumed that Yugoslavia will maintain a constant price level deflated exchange rate throughout the projection period (to 1990). The macro assumption is that policymakers do not try to use the exchange rate to counteract inflation but use nominal devaluations to correct for any differential between Yugoslav inflation and inflation in her trading partners. It is also assumed that import rationing is quickly eliminated, although the levels of official tariffs are assumed to remain unchanged.

As discussed earlier, in the forward-running version of the model, exports are determined endogenously with explicit foreign demand curves for Yugoslav goods. In simulation F–1, the result is that exports grow at an average annual rate of 6.5 percent for the 1983–1990 period (Table 4). Compared to the experience of other semi-industrial countries, this export growth rate is quite moderate. However, given past Yugoslav performance and the confused incentive structure, it is probably best to err on the conservative side in forward simulations.

Experiment F–1 assumes that there is a very slight fall in the share of investment in GDP over the 1983–1990 period and that the share of foreign savings in total savings falls significantly as Yugoslavia repays its foreign debt (Table 6). These projections reflect stated Yugoslav policy objectives. It is assumed that total factor productivity growth will recover by 1985, gradually increasing to one percentage point a year by 1987 and remaining at that rate. This projected increase is assumed to follow from the shift in development strategy, as has occurred in other countries pursuing such policies.[11] The assumed increase in total factor productivity growth, in fact, is quite small when compared to that in other semi-industrial countries.[12] The result is that the GDP growth rate is 3.9 percent a year for the 1983–1990 period with some acceleration in the latter part of the period.

Simulation F–1 represents an optimistic scenario but is conservative in many of its behavioral assumptions. The fundamental optimistic assumption is that the Yugoslavs are able to implement a shift in incentives to achieve a more open development strategy. Given this shift in policy, the concomitant assumptions about world conditions and the responsiveness of the economy are conservative, especially when compared to the experience of other semi-industrial countries that have faced similar difficulties, for example, Turkey.

Simulation F–1 is also based on fairly conservative assumptions about the ability of Yugoslav policymakers to maintain macro balance. The fixed investment rate, which Yugoslavs are seeking to lower, is assumed to decline slightly—to 22.9 percent of GDP in 1990 (down from about 26 percent in the 1981–1983 period). The projected inflation rate is assumed to be 16.2 percent a year on average over the 1983–1990 period with significant deceleration over time (Table 4). The assumed maintenance of a roughly constant price level deflated exchange rate leads to balance of payments and debt-repayment projections that are consistent with projections by Yugoslav authorities and international agencies. Given the projections of real investment and the balance of payments, domestic savings adjusts to achieve macro balance. In simulation F–1, the major adjustment is through changes in government savings which are projected to increase as a share of total savings. In this simulation the government does not implement a strong incomes policy (i.e., it is unwilling to restrict enterprise payments to workers) and hence, permits a small, gradual increase in real personal incomes of about 1.1 percent a year. Thus, these macro projections reflect a continued policy effort to control government expenditure (collective consumption and nonproductive investment) and a relaxation of administrative controls on personal incomes in the social sector.

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[11] See Nishimizu and Robinson [1983] for evidence of this relationship. Balassa [1982] also discusses why one would expect links between an open development strategy and faster productivity growth.

[12] See Chenery [1984] for a survey of evidence from a number of semi-industrial countries.

We have also done a number of simulations with the CGE model to explore the implications for future Yugoslav performance of different assumptions about the macroeconomic policy options available to policymakers. In these experiments we have specified a different macro-equilibrating mechanism (or macro "closure") in the model than that used in the historical simulations. In these experiments, the aggregate investment rate out of GDP, the exchange rate, and the level of personal incomes of workers are set exogenously. The aggregate price level adjusts endogenously to achieve a savings-investment balance. The implicit assumption is that the government, by controlling the level of nominal personal incomes, is able to control the distribution or savings decisions of enterprises. The price level adjusts so that, through inflation, real incomes are made consistent with macroeconomic equilibrium. The inflationary mechanism implicit in this specification is a kind of "cost push," but inflation is also sensitive to the level of investment demand. For a given level of investment, an increase in personal income will lead to higher prices. However, for a given level of nominal income, increased investment will also lead to higher prices, lower real income, and, hence, higher enterprise savings.

This view of the inflationary mechanism in Yugoslavia is rather special in that it reflects particular Yugoslav institutional features. For example, the way personal incomes are set by enterprises is assumed to be independent of decisions about employment, so that inflation has no feedback on aggregate employment. There is evidence that this macro specification is appropriate for Yugoslavia, but one would not want to apply it to other countries indiscriminately.[13]

In addition to simulation F–1, which might be considered as a forward base run, we have done three other simulations which explore the trade-offs among macro forces and policy choices. All these experiments start from F–1 and are thus also conditional on its major policy assumptions: (1) a similar exchange rate policy, (2) an export incentive system that allows exporters to respond to change in prices, and (3) improvements in world conditions after

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[13] See Tyson [1977]; also, see Horvat [1971] and Tyson [1980].

1983. The simulations all start from the same 1983 solution and include the same behavioral specification discussed above regarding endogenous foreign capital flows and inflation.

Simulation F–2 assumes a lower investment rate out of GDP than in F–1, starting in 1984 and continuing throughout the period. The fixed investment rate falls to 19.2 percent (in 1990) compared to 22.9 percent in F–1.

Simulation F–3 adds to F–2 a policy regime limiting nominal wage increases. As a consequence of wage restraint, the rate of growth of nominal incomes is 4.7 percentage points lower in 1984 and about 1 percentage point lower thereafter.

Simulation F–4 adds to F–3 higher total factor productivity growth assumed to accompany the shift in development strategy. The total factor productivity growth rates are −1.0, 1.5, 1.5, and 1.5 percent a year for the nonagricultural sectors in 1984, 1985–86, 1987–88, and 1989–90. The comparable rates for the other simulations are −2.0, 0.5, 1.0, and 1.0 percent a year.

The impact effect of these experiments hits in 1984, and then the economy moves along a different path for the rest of the period. The results are given in Tables 4 to 6. Table 4 indicates clearly the impact of the different scenarios in 1984. Compared to F–1, the fall in investment in the other experiments is dramatic—a minus 10–11 percent growth rate in 1984 compared to a 0.4 percent rise in F–1. The impact of the wage restraint in simulations F–3 and F–4 is also evident.

In simulation F–2, the decline in investment is significant. The investment share in GDP is about 4 percentage points lower throughout the period, and the capital stock in 1990 is about 5 percent lower than that in the F–1 simulation. The policy has the desired effect on the balance of trade. Lower investment leads to slower inflation which, given the fixed nominal exchange rate, leads to a real devaluation in 1984. Exports increase and, due largely to lower growth, import demand decreases. The net result is that cumulative net foreign capital inflows are $15.5 billion less than in simulation F–1 (Table 5). The slower inflation actually leads to higher real wages in 1984, since the nominal wage growth is roughly the same as in F–1. However, the slower GDP growth over the period leads to slower real wage growth as well, finally eroding most of the initial gain in real wages (see Table 6).

In simulation F–3, the assumed wage restraint policy leads to a lower inflation rate in 1984 but lower growth of real wages compared to F–2. The lower inflation leads to an even higher real devaluation in 1984 and a higher export growth rate. The net effect is a much greater change in cumulative foreign capital inflows ($23.2 billion less than in F–1 and $7.7 billion less than in F–2). The wage restraint policy is thus successful in that, coupled with the decrease in investment, it leads to even better balance-of-payments performance. GDP growth is lower in 1984, although the difference is slight by the end of the period. Real wages, however, never recover and remain significantly lower at the end of the period.

The final simulation, F–4, assumes that the shift in development strategy to increased exports and reliance on market mechanisms leads to higher total factor productivity growth. In this more optimistic scenario, exports increase even more as total output is higher. GDP growth is higher than in F-1 and much higher than in F-2 and F-3. Higher exports lead to improved balance-of-trade performance, with cumulative net foreign capital inflows of $3.2 billion lower than F-3 (and $26.6 billion lower than F-1). Real wages, of course, also grow faster than in F-3 and, by 1990, are very close to the F-1 level.

Table 6 indicates that the four scenarios have quite different implications for the composition of savings. They all show a dramatic increase in the share of government savings over time and a dramatic decline in the share of foreign savings. The better the trade performance, the more debt repayment and the higher the negative share of foreign savings in total savings. In simulations F-1 and F-2, the share of enterprise savings falls over time. In the two wage restraint scenarios (F-3 and F-4), enterprise shares of total savings increase slightly over time, although enterprise savings as a share of total value added ends up in 1990 slightly lower than in 1984.

The results from the various forward scenarios indicate the importance of links between a change in incentive policies and supporting macro policies in determining the success of a new development strategy. A real devaluation is needed early in the period in order to remove the bias in incentives against exporting which has been very strong in the Yugoslav system. The real devaluation will work only if enterprises can respond to the shift in relative prices and reallocate resources to increase the production of tradables—both exports and import substitutes. A real devaluation, however, cannot be achieved without first achieving control over macro balances. The reduction of aggregate investment is a major part of the macro package. A nominal incomes policy is also useful because it lowers inflation and so supports a real devaluation early in the period that will not be eroded quickly over time.

Note that, in contrast to an IMF policy package, the goal of an incomes policy is not to reduce real wages (and so improve "competitiveness") but to help control inflation and support a real devaluation. The evolution of real incomes over time depends on the success of the shift in development strategy. In particular, it depends on the speed of recovery in total factor productivity growth and capacity utilization and on policies with regard to the speed of repayment of foreign debt which will affect total absorption.

V. CONCLUSION

The forward-run experiments are cautiously optimistic in their assumptions about Yugoslav policy choices through the end of the 1990s. All of the experiments are optimistic about Yugoslavia's ability to pursue an appropriate exchange rate policy, thereby eliminating the excess demand for foreign exchange and the complicated rationing schemes that have been used in the past and are in place currently. As a result, the bias in incentives against exports is removed, and the attendant productivity and rent-seeking costs of these schemes disappear. All of the forward runs are cautious in their assessment of the likely consequences of these developments for both export and productivity performance. If the recent experience of other semi-industrial countries is any guide, the actual consequences should be even more favorable than those assumed in the simulations.

As far as macro policy is concerned, all of the forward simulations reflect Yugoslavia's stated policy objective to reduce its external indebtedness through the end of the 1990s. Consistent with its experience in the 1981–1983 period, and in earlier stop phases of its recurrent stop-go cycles, Yugoslavia is likely to continue to pursue this objective through a combination of austerity measures to cut domestic investment and/or to increase domestic saving. Austerity measures are likely to continue to include administrative cutbacks of investment and government expenditure and some form of regulation of enterprise decisions with regard to personal incomes and savings. The forward simulations analyze the implications of differences in the severity and composition of such austerity measures for economic performance. The results illustrate the trade-offs between the growth of domestic investment and real wages—indicators of domestic absorption—on the one hand and the balance of payments and debt repayment on the other. None of the macro policy assumptions are unrealistically severe—at least in the light of actual 1981–1983 performance.

Despite the assumption of continued domestic austerity measures, all of the forward runs show improvements in overall indicators of economic growth and absorption relative to the 1981–1983 period. The recovery implied in the results critically depends on the assumption that Yugoslavia successfully introduces a more open, export-oriented development strategy.[14] As the historical scenario of the 1981–1984 period suggests, austerity in the absence of such a strategy is likely to produce continued economic stagnation.

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[14] As of this writing (December, 1983), there are some worrisome signs that continued policy errors in the system of foreign exchange allocation will undermine the shift in incentives necessary to support the new strategy.

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STABILIZATION MEASURES IN YUGOSLAVIA: AN ASSESSMENT OF THE PROPOSALS OF YUGOSLAVIA'S COMMISSION FOR PROBLEMS OF ECONOMIC STABILIZATION

By John P. Burkett*

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SUMMARY

After a decade of relatively unsuccessful experimentation with a system of bargaining and a strategy of extensive growth, Yugoslavia has undertaken a comprehensive reassessment of its economy. Its Commission for Problems of Economic Stabilization (Kraigher Commission) has prepared a set of proposals aimed at creating a unified market economy and increasing economic efficiency. The analysis underlying the proposals is questionable, but the proposed changes appear on balance to be useful. The Yugoslav government has endorsed the proposals and is now preparing to implement them.

STABILIZATION MEASURES IN YUGOSLAVIA

Yugoslavia's Commission for Problems of Economic Stabilization (the Kraigher Commission) recently issued a series of reports which illuminate that country's present predicament and probable future policies. Here we shall sketch the background to the commission's work, summarize and assess its reports, and comment on the prospects for implementation of its recommendations.

I. BACKGROUND TO THE COMMISSION'S WORK

In the post-war period the Yugoslav economic system has passed through four phases: Soviet-style central planning in the late 1940s, decentralized production decisions combined with centralized investment and foreign trade decisions in the 1950s and early 1960s, a market economy with only sporadic central intervention in the late 1960s and early 1970s, and a system of inter-enterprise and inter-regional bargaining introduced by constitutional amendments in 1971 and consolidated by the adoption of a new constitution in 1974. Indicators of economic performance in the last three phases appear in table 1. The table reveals that in the most recent period Yugoslavia attempted a spurt of extensive growth, raising the growth rate of employment and the share of investment in national income while allowing the trade balance and inflation rate to worsen, but failed to increase the growth rate of output. Yugoslav political figures who were aware of their country's declining economic performance were unable to take corrective action in the period of immobility that bracketed Tito's death in May 1980. However, the impasse was broken in mid-1980, when the dinar was allowed to depreciate to a more competitive level.

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TABLE 1.—YUGOSLAV ECONOMIC PERFORMANCE IN THREE PERIODS, 1950–81

[In percent]

Period	Growth rate of employment in social sector	Gross investment in fixed assets as a share of social product	Growth rate of social product	Ratio of exports to imports	Inflation rate for retail prices
1950–65	4.3	[1] 29.5	6.6	65.8	[1] 5.8
1966–73	2.7	30.1	5.5	67.1	11.0
1974–81	4.1	[2] 35.1	4.7	57.3	22.4

[1] 1952-65.
[2] 1974–80.

Source: Savezni Zavod za Statistiku, Statisticki Godisnjak Jugoslavije, 1982 (Belgrade), pp. 81, 83, 85, 93–94.

Given Yugoslavia's long standing economic difficulties and the renewed opportunity for policy initiatives, a need was evident for a long-range program of economic adjustment. To draft such a program the Federal Social Councils created in early 1982 the Commission for Problems of Economic Stabilization. This body is commonly called the Kraigher Commission, in reference to its chairman, Sergej Kraigher.[1]

Over the period April 1982 to July 1983 the Kraigher Commission issued 17 reports. The first, the "Basic premises of the long-range stabilization program,"[2] was intended to serve as the platform of the commission and an orientation for specialists preparing detailed reports. This was followed by 15 specialized studies of topics such as inflation, the external balance, social services, energy, transportation, agriculture, housing, and employment. Finally, the commission issued a summary statement.

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[1] As head of the commission Kraigher merits a biographical note. Born in Slovenia in 1914, Kraigher studied medicine before becoming politically active. He joined the Communists in 1934 and was elected to the Central Committee of the League of Communists of Yugoslavia (LCY) in 1952. He lost his seat on the Central Committee at the tenth LCY congress (1974) and regained it only in 1979, when the Slovene Central Committee chose him to fill the vacancy left by the death of Edvard Kardelj. Kraigher's government positions have frequently entailed economic responsibilities. He served as president of the Slovene Planning Commission (1946–50), governor of the National Bank of Yugoslavia (1951–53), director of the Federal Institute for Economic Planning (1953–58), head of the secretariats for industry (1958) and foreign trade (1959), and president of the Federal Assembly's Committee for Socio-economic Relations (1963–67). From 1967 to 1979 his primary duties were in the government of Slovenia. In 1979 the Slovenian Assembly elected him to the Federal State Presidency. In the reshuffling of offices following Tito's death Kraigher became vice-president of the State Presidency. (See Ko je ko u Jugoslaviji /Belgrade: Hronometar, 1970/, p. 509; and Slobodan Stankovic, The end of the Tito era /Stanford: Hoover Institution Press, 1981/, p. 131.) It is interesting that Kraigher's period of absence from federal politics coincides with the ascendancy of political forces favoring economic coordination by bargaining rather than by impersonal markets.

[2] Borba (Belgrade), April 27, 1982, supplement.

The "Basic premises" were drafted by a 14-man group of which the Macedonian politician Kiro Gligorov [3] was director and the Croatian economist Dragomir Vojnic [4] deputy director. In general, the staff of the "Basic premises" group, like that of the Kraigher Commission as a whole, was largely composed of individuals whose previously expressed views were favorable to markets.

II. SUMMARY OF THE COMMISSION'S REPORTS

The reports are frustratingly vague and repetitious. In summarizing them we shall attempt to extract from the verbal chaff a few factual kernals and to minimize the repetition by focusing on the "Concluding section of the long-range stabilization program," [5] alluding to the "Basic premises" and specialized reports only when they are informative. We reserve critical comment on the substance of the reports until part III of this study.

The "Concluding section" consists of an introduction followed by proposals for reforming socio-economic relations, suggestions for reorienting economic and social development, and an ennumeration of social and economic prerequisites for fulfillment of the stabilization program. The introduction identifies Yugoslavia's most pressing problems as inefficiency, external indebtedness, and the habit of work organizations of not paying their bills. The section proposing changes in socio-economic relations begins by asserting that workers should be commodity producers whose achievements are measured on the market and secure from arbitrary state intervention. However, before workers' achievements can be judged by the market, the document continues, it is necessary to overcome the market segmentation imposed by regional barriers to the mobility of goods, labor, and capital. To this end the Federal Fund for Credit Financing the Economically Underdeveloped Socialist Republics and the Socialist Autonomous Province of Kosovo (hereafter referred to as the Federal Fund) should stimulate integration. Pooling of labor and capital, inter-enterprise credits, joint ventures, etc. should channel investment to regions and sectors where it will yield the best economic results. Realistic interest rates should be adopted to encourage saving and efficient allocation of capital. Partial self-financing should be a prerequisite for all investments. Private saving should be encouraged and channeled into small businesses and housing.

Inflation, monetary policy, and wage-price policy are discussed only briefly in the "Concluding section." However, a fuller treatment is given in the specialized study, "Guidelines for an anti-inflation program".[6] "Guidelines" asserts that although Yugoslavia's inflation is multidimensional, involving elements of cost-, demand-, structural-, and imported-inflation, it is basically due to the subordinate position of workers in disposing of enterprise income. The rate of inflation should be brought down from 40% at the end of 1981 to 25% at the end of 1982, 20% at the end of 1983, 15% at the end of 1984 and 10% at the end of 1985. Four methods are proposed for fighting inflation. First, and of primary importance, the rate of growth of productivity should be raised. To this end harsher policies toward loss-making organizations should be eventually adopted, although for the time being organizations adversely affected by the stabilization program may be exempted from taxes and allowed to postpone depreciation. Second, demand management policies should be used to restrict the growth of the social product to 2–3% annually up to the end of 1985. In this connection, the share of government expenditure in the social product should be cut and the growth rate of the money supply should be gradually reduced, but not so drastically as to lead to insolvency. Interest rates should be gradually raised and the use of bank credit to finance investment discouraged. Third, the total tax burden on the economy should be cut from 35% in 1981 to 30% in 1985. Indirect taxes should be reduced relative to direct ones. Fourth, price controls should be used in the initial phase of stabilization and then phased out.

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[3] Like Kraigher, Gligorov appears to have been making a come-back after a period of disfavor. Born in 1917, he joined the Communist in 1944, served as secretary of the Federal Institute for Economic Planning, secretary of the Federal Executive Council for Economic Affairs, federal secretary for finance, and president of the Federal Assembly. He was elected to the Central Committee of the LCY in 1964 and to the presidency of the LCY in 1969. He was a leading advocate of the Economic Reform in 1965 but became less visible while bargaining was at its zenith of popularity. (See Ko je ko u Jugoslaviji, p. 305; and K. Krishna Moorthy, After Tito What? / New Delhi: Radiant Publishers, 1980/, p. 29.)

[4] Dr. Vojnic is the long-time director of the Economic Institute of Zagreb, a research organization which has generally been sympathetic to decentralization.

[5] Borba, July 15, 1983, supplement.

The "Concluding section" endorses the "Anti-inflation program" but notes that its implementation is one year behind schedule. It recommends that issues concerning the distribution of enterprise income should be left to the workers, who should adopt realistic decisions and embody them in social compacts and self-managing agreements. Domestic prices should be based on world-market prices. In those rare instances in which considerations of social welfare require domestic retail stores to deviate from world-market prices, the producers should be compensated. Monetary policy should maintain the value of the dinar, which must become the sole means of payment on the domestic market. Foreign currencies must not be used in this role.

The "Concluding section" treats the external balance briefly, with more detailed discussion relegated to the special report, "Elements of the policy and system of foreign economic relations." The latter acknowledges that Yugoslavia's slowness to respond to changing prices on the world market has contributed to unsustainable trade deficits. The solution is to be found by expanding exports of commodities in which Yugoslavia has a comparative advantage. The document suggests five priorities: First, the share of Yugoslav exports in world imports should be raised over the next three to four years to 0.6%, that is, by 40%. Second, Yugoslavia should reduce its dependence on imported energy. Third, it should increase net exports of food. Fourth, it should concentrate its raw materials complex in areas of its comparative advantage (nonferrous metals, nonmetalic minerals, chemicals, and wood). Finally, it should develop further its transportation and tourism industries.

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[6] Borba, June 17, 1982, supplement; translated in Foreign Broadcast Information Service, East Europe Report, Economic and Industrial Affairs, July 23, 1982, pp. 77–98.

Toward these ends "Elements" calls for a number of policy changes. A unified and realistic exchange rate is needed. Enterprises should be able to buy as much foreign exchange as they need from authorized banks. The Yugoslav Community of Interest for Foreign Economic Relations should use input-output tables or some other objective method in determining the foreign exchange needs of enterprises. The practice of allocating foreign exchange borrowing rights among republics and autonomous provinces must be abandoned. Convertibility of the dinar should be sought first in current transactions and then in financial ones. Tariffs should gradually replace import quotas, and then tariff rates should be gradually reduced. However, non-tariff barriers other than quotas (technical standards, usages, and certificates) should be more widely used. The Yugoslav Bank for International Economic Cooperation should extend more credit to the foreign purchasers of Yugoslav exports.

To these suggestions, the "Concluding section" makes only three noteworthy amendments. First, extreme caution must be exercised in borrowing abroad. Second, foreign exchange earnings must either be pooled for making payments abroad or sold to commercial banks. In no case are they to be hoarded or used in domestic transactions. Third, trade with developing countries should be expanded.

The material in the "Concluding section" dealing with changes needed in the pattern of socio-economic development consists of an introduction followed by proposals for social services, regional development, energy, technology, transportation, agriculture, small business, housing, employment, and social welfare policy. The introduction asserts that it is now imperative to do what should have been done 10 years ago, namely, change the pattern of development so as to avoid autarky, an excessive capital-labor ratio, an uneven regional distribution of productive forces, and structural disproportions involving neglect of agriculture, the maritime industry, transportation, and tourism. The new development pattern should be characterized by greater utilization of existing capacity, more thorough integration of the Yugoslav market, more exports (particularly of highly processed goods), a smaller share of investment in the social product, a smaller share of foreign capital in investment, adaptation of consumption patterns to present world-market conditions, and faster development of domestic science and technology through integration of scattered research facilities.

The section on social services asserts that these have expanded too rapidly in the past. (The specialized study, "Policy of development of social activities as a factor of economic stabilization,"[7] noted that the participation of social services in the social product had grown from 11.7% in 1960 to 14.7% in 1970 to 16.5% in 1978 before being cut back to 14.8% in 1980.) It further asserts that subsidization of services has created excess demand and its companions, low quality, poor assortment, and favoritism. It proposes to increase user fees and to allow the users a greater voice in administering services. It also urges a reduction in duplication of services and an improvement in their regional distribution. The latter goal might be accomplished by use of the budgetary resources which the federal government provides to finance social services in economically underdeveloped areas.

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[7] Borba, January 4, 1983, supplement.

The passage of the "Concluding section" concerning regional development notes that in the past 10-15 years cities have grown excessively, while rural areas have been neglected. Now an attempt should be made to utilize efficiently the resources of all regions, including rural land and buildings. Development of the economically underdeveloped republics and particularly of Kosovo should be advanced by encouraging inter-regional pooling of capital and labor. Work organizations should be given a greater voice in managing the Federal Fund.

The energy related material in the "Concluding section" is based on the specialized study, "Strategy for long-range development of energy," [8] prepared by a team headed by Dr. Hrvoje Pozar, a professor of electrical engineering and member of the Yugoslav Academy. Although this specialized document lacks a framework of economic analysis, it is a treasure trove of data on Yugoslav energy reserves and consumption. It indicates that Yugoslavia has done very little since the energy shock of 1973 to adapt to new world market conditions. Energy consumption per dinar of social product declined only negligibly after 1973, while the share of petroleum in energy consumption actually rose. Little has been done to increase domestic production of coal, petroleum, or natural gas. Construction of hydroelectric plants on the Drina and its tributaries has been blocked by disagreements among republics about the use of the water. To make matters worse, one of the few initiatives taken which might reduce use of petroleum appears to be economically irrational: Zirovski Vrh Uranium Mine is set to start production of uranium concentrate in 1984 but at a price three times that prevailing on the world market.

To increase domestic energy production the "Concluding section" proposes that Yugoslavia build more hydroelectic plants, more nuclear power stations, and more conventional power plants adjacent to lignite mines. To stimulate energy conservation it urges an end to subsidization of energy use by industry and households. To improve the allocation of energy it proposes that the electric power communities of the republics and provinces harmonize their electricity prices.

The passage of the "Concluding section" dealing with technology states that in the past Yugoslavia has underutilized its own research and development capacity and been too eager to buy foreign technologies. Fuller utilization of domestic capacities requires greater communication among regions and between universities and industry.

The "Concluding section" on transportation is based on a specialized report, "Long-range program of economic stabilization in the area of transportation," [9] which notes three principal inefficiencies in the existing transportation system. First, railroads and ocean-going vessels are utilizing less than 50% of their load-carrying capacity and filling less than half their passenger seats. Second, the proportion of energy which is derived from petroleum and used by transportation rose from 46% in 1966 to 96% in 1980, due largely to the more rapid development of highway transportation than other forms. Third, Yugoslavia's coastal and riverine transportation routes are underutilized. The document proposes that the railways be modernized and made the basic means of overland transportation. To this end it suggests increasing the share of electrified service in total railway service from the present 33% to 50% and building a high-speed line (160 km/hr) connecting Ljubljana, Belgrade, and Nis. It recommends increasing the merchant marine fleet and accelerating the development of river transportation, especially along the Danube, where a recently completed hydroelectric system and a soon-to-be completed canal system should increase navigability. It urges a retardation of development of highway transportation, especially of passenger cars, private trucking, and motor pools within enterprises outside of the transportation business. Nonetheless, it suggests increasing the share of paved roads in total roads from 50% to 60% over the next decade. The "Concluding section" adds that the regional encapsulation of transportation in general and railroads in particular must be quickly overcome.

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[8] Borba, March 24 and 25, 1983, supplement; translated in Foreign Broadcast Information Service, East Europe Report, Economic and Industrial Affairs, June 9, 1983.

[9] Borba, January 27, 1983, supplement.

The "Concluding section" on agriculture is based on the specialized study, "A long-range program for agro-industrial production," [10] which identified three key problems. First, private farms, which account for 84% of farmland, are small (4.1 hectares of farm land on average), isolated, and too often oriented toward subsistence agriculture. Second, the socialized sector of agriculture is undersized, particularly with respect to its livestock herds, which account for only 10% of total livestock. Third, policies with respect to prices, investment, credit, land, taxes, and foreign trade have been poorly coordinated. Agricultural priorities for the future are (in descending order of importance) as follows: grain and its derivatives, industrial crops (especially oil-bearing plants and sugar beets), and fruits and vegetables. Socialized farms should expand and specialize in grain and industrial crops. (By the year 2000 they should be operating 30% of all farm land and producing about 5.5 million tons of corn.) Private farms ought to concentrate on animal husbandry, livestock feed production, and production of fruits and vegetables. Concentration of animal husbandry in the private sector can be justified by the existence of 2.7 million livestock buildings in that sector and the need to raise the incomes of small farmers. Nonetheless, there is room for an expansion of animal husbandry on socialized farms, considering its present small size.

The agro-industrial program notes several areas in which regional integration is required. These include the fruit market, where produce often spoils in one locality while it is unavailable in another; the food processing industry, where excess capacity is common; agricultural research, where scientists in different regions are at present shut off from each other; and investment, where flows are currently confined within regional boundaries, resulting in unequal returns to capital.

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[10] Borba, November 1, 1982, supplement.

The program recommends that in the immediate future agriculture's share in investment be at least equal to its share in social product (13% in 1981). To achieve this target incentives such as tax credits and concessional interest rates are suggested.

According to the agricultural program, price policy should no longer be used to protect the standard of living of the population. However, this stand is qualified in the "Concluding section," which states merely that if considerations of social policy require holding down the price of food, this should be done at the expense of the whole society and not that of agriculture alone. Price formation for agricultural inputs and outputs should be gradually liberalized, along with foreign trade. However, price supports should be retained for wheat, corn, grapes, pork, poultry, powdered milk, oil, lard, sugar, soybeans, and alfalfa meal. The level of a support price should be equal to the average domestic market price over the previous 5 years or the average prime cost, whichever is larger.

Private farmers currently pay very little in taxes, and tax rates are ineffective as policy instruments. The agricultural program proposes to raise tax rates enough to achieve some influence over land utilization. Tax laws should be amended so as to make it expensive to own land without cultivating efficiently.

The program proposes a series of steps toward making Yugoslavia a large net exporter of agricultural products. First, imports of wheat, wool, and soybeans should be sharply and immediately reduced. Second, by 1990 the country should become a small but steady net exporter of agricultural products. Finally, by the year 2000 the country should be exporting large quantities of corn, beef, pork, poultry, lamb, wine, and grapes.

The "Concluding section" stresses that to retain labor in private agriculture it will be necessary to improve the provision of social services to rural areas and of old-age insurance to farmers and to settle unresolved questions concerning inheritance of farmland.

The "Concluding section" on small business asserts that this sector of the economy is underdeveloped.[11] It employs less than 10% of the labor force in Yugoslavia—although it employs 40% in some more advanced countries. The neglect of small business has restricted domestic product assortment, increased import demand, reduced employment opportunities, curbed innovation, and limited adaptability. To remedy these ills the section proposes that private and public resources be channeled into small business. Private domestic savings should be directed into small business by tax and credit policy and by removal of unnecessary regulations. Customs and tax policy should be adjusted so as to encourage Yugoslavs employed abroad to make their resources available to domestic small business. Publicly owned but underutilized plant and equipment should be put at the disposal of small businesses.

The section on housing is based on the detailed report, "A long-run program of economic stabilization of housing and communal economy," [12] which notes that substantial progress has been made in relieving the post-war housing shortage. From 1951 to 1981 the average apartment area per inhabitant increased from 8.7 to over 15 square meters. According to preliminary results from the 1981 census, the number of housing units and the number of households is nearing equality (6,148,000 housing units to 6,158,000 households). Nonetheless, certain problems remain. As the "Concluding section" observes, when (as is common in Yugoslavia) housing is subsidized by the employer, the tenants have little incentive to insist on economical construction and to economize on the use of space. Consequently, Yugoslav expenditure on housing construction (10% of national income) is high compared to the quality of the housing. Furthermore, the cost of housing construction is rapidly rising. The value of an apartment 10 years ago amounted to 6.95 times the annual income of the worker, while today it is 11.79 times. As a norm, the ratio should be closer to 4.5. In addition, subsidized housing has given rise to favortism in allocation. To correct these problems the document offers the following suggestions: More opportunities should be created for housing construction for the private market. Loans for private home construction should be more readily available. Rent on publicly owned housing should be raised in the near future to at least cover maintenance (simple reproduction) and ultimately to finance new construction (expanded reproduction). Municipal service to households should be financed primarily by user fees.

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[11] This section is based on the specialized report, "Position and development of the small economy," Borba, March 30, 1983, supplement.

The section on employment is based on the preliminary report, "Problems of employment and lines of activity to resolve them," [13] which notes that despite rapid employment creation in the post-war period, the problem of unemployment and underemployment remains critical. In 1981, according to Yugoslav statistics, the number of unemployed exceeded 800,000 and the number employed abroad was 577,863. (Western European statistics sources suggest a higher value for latter variable.) In addition, many individuals who remain on enterprise payrolls have become underemployed due to technical change. The unemployment problem originates in the rapid exodus of labor from agriculture, the coming of age of the baby-boom generation, a school system which produces an inappropriate mix of skills, and overly capital-intensive investment resulting from taxes related to employment and from negative real interest rates. An effort should be made to achieve full-employment by the year 2000 at the latest. Toward this goal a number of steps are suggested. Work organizations should operate more than one shift. Small and presumably labor-intensive businesses should be encouraged in both the public and private sectors. Investment should be channeled into labor-intensive sectors of services, food processing, metal fabrication, machine building, transportation, production, chemicals, wood products, textiles, leather, housing, and agriculture. Representatives of the unemployed should participate in the review of proposed investment projects. Schools should give a broad education, while work organizations should be responsible for specialized training. An incomes policy is needed to promote accumulation. It should be flexible enough to allow relative incomes to rise in occupations where job vacancies exist. The burden of taxes on labor incomes should be shifted to other tax bases. There should be fiscal incentives for job creation, especially the hiring of trainees. The work week may be shortened from its present 42 hours and part-time jobs created. The "Concluding section" adds that the right to a job should not be interpreted as the right to be paid while neglecting work or mismanaging public resources.

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[12] Dokumenti komisije (Belgrade: Centar za Radnicko Samoupravljanje, 1982), pp. 113-138.
[13] Dokumenti komisije, pp. 91-112.

The section on social welfare policy derives from the report, "Bases and frameworks of long-range social policy," [14] which overlaps substantially with the reports on social services, housing, and employment. Confining our attention to the material which differentiates the report on social policy from the others, we take note of the following points: In the past two decades social policy has had to contend with a gross transfer of 6.5 to 7 million people from agricultural to non-agricultural pursuits, a sharp rise in the number of households, and a fall in their average size. Social policy has responded to the challenge by increasing the scope of social services and urban amenities, but not always efficiently. The priority task in the coming years is to strengthen the role of clients in the administration of social services. The "Concluding section" adds that while further leveling of differences due to differences in productivity must be resisted, steps should be taken to curb the growth of inequality due to unemployment and property incomes. Higher taxes should be imposed on unearned incomes.

The final part of the "Concluding section" is concerned with implementation of the stabilization program. After a few pages of admonitions to citizens to live within their means, distribute income according to work, and fight in behalf of self-management and national equality, a schedule appears for phasing in the proposed measures. In the second quarter of 1983 the measures were to be simultaneously introduced in the areas of investment, foreign trade, taxation, incomes and prices, and money and credit. In the fourth quarter work organizations were to adjust their plans for 1984 in light of the new policy measures. In the indefinite future the indicated measures in technological and energy policies are to be implemented.

III. Critical Assessment of the Commission's Reports

The general thrust of the commission's reports is that the system of all-sided bargaining as practiced over the last decade (though not necessarily as codified in the constitution) is inefficient and should be replaced by a unified market mechanism guided by moderate macroeconomic policies. There can be little doubt about the inefficiency of bargaining. On the theoretical level, Leif Johansen makes a strong case that bargaining often leads to worse allocations of resources than do either rational central planning or competitve markets.[15] On the empirical level, Yugoslav economic performance in the decade of bargaining does not compare favorably with its early performance under other institutional arrangements. However, questions could be raised as to whether Yugoslavia should be moving in the direction of increased reliance on markets rather than central planning. Superficially, the data in table 1 suggest that the country's performance in its period of maximum reliance on markets was inferior to its performance in the preceding era, when central planning of investment and foreign trade was still practiced; probing deeper does not fundamentally alter this impression. Comparative studies in microeconomic efficiency [16] and macroeconomic stability [17] in the periods before and after the 1965 Economic Reform are unfavorable to the later period. Why then does the commission regard markets as the obvious alternative to bargaining? Perhaps the devolution of political authority from the federation to the republics is now so extensive and irreversible as to preclude the restoration of even such modest remnants of central planning as existed in 1964.

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[14] Borba, January 10, 1983, supplement.

[15] "The bargaining society and the inefficiency of bargaining," Kyklos, 1979, pp. 497-522.

Accepting as a basis of discussion the notion that Yugoslavia is to move toward greater reliance on markets, we are led to inquire whether the commission has outlined a coherent proposal for the functioning and guidance of a market economy. In this connection three clusters of questions arise. One group concerns shortages and their consequences. The major question in this group is whether the commission arrived at a proper diagnosis and prescription for the shortages evident in such sectors as social services, energy, and housing. The commission regards excess demand as a product of disequilibrium pricing and prescribes price increases as the cure. This diagnosis and recommendation is consistent with neo-classical thinking but has recently been challenged by Janos Kornai, who argues persuasively that firms which are confident of being bailed out of financial difficulties (i.e., face soft budget constraints) develop an almost insatiable appetite for inputs and are insensitive to prices.[18] Under these circumstances, if the price of (say) housing is raised, households will crowd into smaller spaces, but firms will convert the freed space into offices, leaving the space shortage essentially unchanged. The commission acknowledges the existence of soft budget constraints by listing among Yugoslavia's three most urgent economic problems the habit of work organizations of not paying their bills. However, it neither connects this habit with the problem of excess demand nor proposes a credible plan for breaking the habit. On the contrary, the commission seems to encourage the habit by its suggestion that during a transitional period of indefinite length financially insolvent firms be excused from taxes and depreciation.

In the same cluster with the question of shortages is a question about elasticities of substitution. The commission proposes to induce substitution of abundant fuels for scarce ones by raising the relative price of the latter. However, if enterprises face soft budget constraints and are consequently insensitive to prices, their elasticities of substitution may turn out to be disappointingly low. Indeed, low elasticities may be part of the explanation of why the share of petroleum in Yugoslav energy consumption has not decreased since 1973.[19]

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[16] Andre Sapir, "Economic growth and factor substitution: what happened to the Yugoslav economic miracle?" Economic Journal, 1980, pp. 294-313.

[17] John Burkett, The effects of economic reform in Yugoslavia: investment and trade policy, 1959-1976 (Berkeley: Institute of International Studies, 1983).

[18] Economics of shortage (Amsterdam: North-Holland Publishing Co., 1980); and Growth, shortage and efficiency (Berkeley: University of California Press, 1982).

A second cluster of questions concerns factor ratios. One question is whether the commission correctly explains the existence of excessively high capital-labor ratios. The employment document blames these ratios in part on taxes on employment. This explanation would make sense if Yugoslav firms could be assumed to seek higher total profits but it breaks down if they are assumed to seek higher income per worker. Although Branko Horvat has suggested that the first supposition is the more realistic,[20] most students of the issue lean toward the latter.[21] If we assume that firms seek to raise income per worker, then we may suspect that the cause of excessive capital-labor ratios is not taxes on employment, but rather too much reliance on self-financing.[22] If this is the case, then the commission's proposal to discourage external financing of investment may be misguided.

A second question in the second cluster relates to the optimal choice of technique in export-oriented industries. The employment document asserts that export-oriented industries should be furnished the most up-to-date and presumably most capital-intensive equipment while other industries adopt techniques appropriate to the country's factor proportions. Applied to a labor-abundant country, this doctrine would seem to lead to an unfortunate inversion of the Heckscher-Ohlin theorem. Instead of proposing that Yugoslavia export goods intensive in the factor with which the country is abundantly endowed, the commission proposes that whatever goods the country exports should be produced by a technique making intensive use of the country's scarce factor.

A final question in this cluster concerns the relationship between factor proportions and the scale of an enterprise. In advocating the development of small business as a palliative for unemployment, the commission implicitly assumes that small businesses are labor-intensive. This is a venerable assumption, dating back to Piercy Ravenstone, but one which has not been subject to much empirical testing.[23] More testing would be desirable before weighty policy decisions are taken on the basis of this assumption.

A third cluster of questions arises in connection with the proposals for combating inflation and unemployment. A major question in this area concerns the feasibility of relying primarily, as the commission proposes to do, on accelerating productivity growth to reduce the rate of inflation. The difficulty with this proposal is simply that even doubling or tripling productivity growth would make only a small dent in an inflation rate of around 40%. A second concern is that the inflation and unemployment programs are inconsistent with each other. The inflation program calls for rapid productivity growth and slow growth of aggregate demand, implying slow employment growth. Similarly, the inflation program requires a shift from indirect to direct taxes while the employment program calls for a shift from taxes on labor to some other, possibly indirect, form of taxation.

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[19] John Burkett, "Search, selection, and shortage in an industry composed of labor-managed firms"; paper presented at the meeting of the American Association for the Advancement of Slavic Studies, Kansas City, October 1983. Forthcoming in *Journal of Comparative Economics.*

[20] "Prilog zasnivanju teorije Jugoslavenskog poduzeca," Ekonomska Analiza, 1967, pp. 7-28.

[21] Benjamin Ward, The socialist economy (New York: Random House, 1967); Jaroslav Vanek, The general theory of labor-managed economics (Ithaca: Cornell University Press, 1970); Sapir, op. cit.

[22] Jaroslav Vanek, "The basic theory of financing of participatory firms," in Vanek (ed.), Self-management (Baltimore: Penguin, 1975).

[23] One of the rare attempts is to be found in Ryuzo Sato, "Homothetic and non-homothetic CES production functions," American Economic Review, 1977, pp. 559-569.

IV. PROSPECTS FOR IMPLEMENTATION OF THE COMMISSION'S PROPOSALS

The commission's reports received mixed reviews in the Yugoslav press. Critics of the commission fell into three groups. In one group were those who attacked the program for moving to replace bargaining by impersonal markets; in another were those who chided it for not going far enough in that direction; and in the third were those fearful of losing the advantages they had gained from republican autonomy in foreign exchange transactions. Representative of the first group of critics are the economists Kresimir Brandt and Ivan Vlahovic, who counterpose to commodity production (which they believe to be dying worldwide) a "people's agreement that would elaborate a conception of associated labor." [24] Representative of the second group is the Slovene economist Franc Cerne, who contends that the commission understates the culpability of laws adopted in the last decade for creating present economic difficulties and that the commission does not forcefully enough "rehabilitate commodity production." [25] Representative of the last group is the Slovene party leader France Popit, who objects to the reduction in republican powers implied by the commission's call to allocate foreign exchange among enterprises in all areas according to uniform criteria.[26]

The supporters of the commission's proposals won the argument in the legislative arena. In July 1983 the Federal Assembly adopted the commission's program, although some delegates expressed reservations about parts of it.[27] Since its official adoption, the commission's program has had few vocal critics. Indeed, the slogan of the day seems to be "we are all market socialists now." Mitja Ribicic, a member of the presidium of the LCY, complains that "everyone talks about stabilization, but there is no differentiation made as to how people see stabilization, whether they implement it or behave contrary to its goals." [28] There are enough contradictions in the program, particularly between the sections on inflation and unemployment, to give each faction some plank to which to cling. Conflicts over the interpretation of the program will have to be resolved by a commission for implementation of the program which has been established by the Federal Executive Chamber.[29]

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[24] Quoted in Foreign Broadcast Information Service, East Europe Report, Economic and Industrial Affairs, January 27, 1983, pp. 105–9.

[25] Ibid.

[26] Cited in Radio Free Europe Research, September 16, 1983, p. 4.

[27] NIN (Belgrade), August 7, 1983, p. 7.

[28] Borba, July 18, 1983; cited in Radio Free Europe Research, August 1, 1983, p. 2.

[29] S. Kraigher, "Introductory report submitted to the federal conference of the Socialist Alliance of Working People of Yugoslavia," translated in Foreign Broadcast Information Service, East Europe Report, Economic and Industrial Affairs, August 11, 1983.

Given the strong resemblance between the programs of the 1965 Economic Reform and the current stabilization effort, it is reasonable to ask whether the latter has a better chance of taking permanent root than did the former. The earlier attempt at reform was aborted when the embryonic market economy proved to be unexpectedly unstable. The new program for strengthening the market mechanism does not appear to be any more coherent than the old, and the economic conditions under which it must be implemented are less favorable. Thus the prospects for the stabilization program becoming a lasting success appear dim. Nonetheless, this round of market-oriented reforms has a chance of outlasting the last, if only because there can now be fewer illusions about the alternatives.

YUGOSLAV AGRICULTURAL PERFORMANCE IN THE 1980'S AND PROSPECTS FOR 1990

By Nancy J. Cochrane*

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I. SUMMARY

In the remainder of this decade, the Yugoslav Government plans to place greater emphasis on the agricultural sector, which up to now has been seriously neglected in favor of rapid industrial development. But gains in agricultural production must come from higher yields since total arable land is projected to decline. Several problems will hamper gains in productivity.

A fragmented private sector.—Two-thirds of Yugoslavia's agricultural production is produced by small, fragmented, privately owned farms with poor access to capital. Efforts to expand the social sector and increase private farmer cooperation with the social sector have not been successful.

Lagging agricultural investment.—The share of agriculture in total investment is only 6 percent, while its share in social product is 13 percent. Overall investment is projected to decline; thus even if high priority is placed on agricultural investment, it cannot increase much.

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Pricing distortions.—Prices of many basic commodities are controlled, and even though these prices have been raised substantially, they have not kept up with the costs of production.

Input shortages.—Shortages of fertilizers and other inputs whose production depends heavily on imports will continue since Yugoslav policy envisions continuing efforts to reduce imports.

Proposals addressing these problems were advanced by the Commission of Problems of Economic Stabilization, referred to here as the Kraigher Commission, which was set up to propose long-term solutions to Yugoslavia's serious economic problems, including those of the agro-industrial sector. Among the commission's proposals were the strengthening of the socialized sector, a greater role for the free market in setting prices, an increase in agriculture's share in investment, and an expansion of domestic capacity for the production of fertilizer and other inputs.

Many of these proposals are not new and have not met with much success in the past; prospects for such changes in the future are thus minimal. For this reason, improvements in agricultural production by 1990 are likely to be modest. The grain crop may reach 19 million tons by 1990. Yield increases will be around 30 percent over the 1965–70 average, an average annual increase of 2.2 percent, compared with an average annual gain of 3.4 percent during the seventies. Greater gains are possible in oilseed production. The Yugoslavs are making concerted efforts to expand soybean production, and the sunflower crop, currently reduced by disease, should rebound. If the expected gains in oilseeds are realized, recent declines in livestock inventories should reverse.

Yugoslav's agricultural trade balance should improve. Net wheat imports, high in recent years, can be greatly reduced; imports of oilseeds and protein meal will continue, but at a reduced level. However, the expected improvement in the trade balance will come mostly from reduced imports, not from expanded exports. Corn exports will likely remain strong, but will probably not see a dramatic increase. Expanded livestock production may allow some increase in meat exports, but efforts to attain dramatic increases will exacerbate domestic shortages.

The expected improvement in Yugoslavia's agricultural trade balance will limit prospects for U.S. agricultural exports. The United States is a major supplier of wheat and oilseed products to Yugoslavia, and the Yugoslavs are expected to reduce imports of both. The U.S. share in Yugoslav imports has been as high as it was largely because of credit guarantees granted by the Commodity Credit Corporation (CCC). Continued willingness to grant such credit may enable the United States to retain its share in Yugoslav trade.

II. INTRODUCTION

Since the midseventies, the Yugoslav economy has faced serious economic problems: increasing inflation, high unemployment, inefficient investment, and a hard currency debt now approaching $20 billion. The trade deficit has recently been reduced, but at the expense of stagnating industrial production resulting from shortages of imported raw materials. Within this context, the agricultural sector, too, has been stagnating. With the exception of 1982, which was an exceptionally good year, agricultural production has continually fallen short of goals, and during 1975–80 agricultural imports averaged $1.3 billion, with an average deficit of $500 million.

In late 1981, in response to the overall economic problems in Yugoslavia, the Yugoslav Government established the Commission of Problems of Economic Stabilization, made up of highly placed Government officials and headed by Sergej Kraigher, member of the Yugoslav Presidency. The Kraigher Commission aided in the revisions that have been made to the 1981–85 5-year Plan, but its primary task was to put together a comprehensive long-term program for resolving Yugoslavia's economic difficulties. The intent of the Government was to translate the proposals of the Commission into concrete policy and use them as a basis for future medium term plans. Because of the attention being given to them by the Yugoslav Government, the proposals of the Kraigher Commission can be taken as a reflection of national intent.

The Kraigher Commission's findings have been published in a series of reports dealing with specific sectors of the economy. These reports were prepared by working groups of academicians, heads of institutes, and other experts in the various fields. The report on the agro-industrial sector (agricultural production plus the food processing industry) appeared in November 1982. The final report of the commission, summarizing the main points of the individual reports, appeared in July 1983 and was subsequently approved by all Government bodies. It is now up to the Government to implement the program.

The Kraigher Commission presented ambitious production goals for the year 2000. The realization of these goals depends on significant productivity gains that would result from the major policy changes that it proposed. Such changes will be difficult to accomplish and, consequently, the hoped for productivity gains will most likely not be realized. Crop and livestock projections for 1990, presented in this paper and based on 20-year trends, cast serious doubt on the feasibility of the commission's goals.[1]

III. Role of the Private Agricultural Sector

The Yugoslav agricultural system consists of a large private sector and a much smaller socialized sector. The socialized sector mainly consists of labor managed enterprises, which are vertically integrated into large conglomerates known as *kombinats*. A typical *kombinat* is involved in all aspects of agro-industrial production, from primary crop and livestock production to food processing, marketing, and foreign trade. A much smaller part of the socialized sector consists of cooperatives, or associations of private farmers who join together for common marketing, pooling of machinery, and other functions. Socialized agricultural organizations must conform to the general guidelines of Government plans, which are mostly at the republic level, but within those limits the organizations operate with a fair amount of autonomy and are supposed to show a profit.

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[1] The methodology used to make these projections is the same as that described in Cook, Cummings and Vankai.

Of the 7.8 million hectares of arable land in Yugoslavia, 84 percent belonged to the private sector in 1980. This ratio has not changed since 1970. The private sector in 1980 employed 94 percent of the agricultural labor force and owned 91 percent of the livestock, including 97 percent of the sheep, 91 percent of the cattle, 80 percent of the hogs and 59 percent of the poultry. The private sector produced about 63 percent of the Yugoslav wheat crop and 83 percent of the corn.[2]

A. Productivity in the Private Sector

Authorities regard the dominance of the private sector as undesirable in part for ideological reasons, but also because productivity is significantly lower in the private sector. The maximum allowable size of a private farm is 10 hectares (in some republics more is allowed in the mountainous, less fertile regions). Yet the average private holding is only 3.2 hectares. These farms on the average consist of nine separate plots of land (Zecevic interview with Stanic). The distribution of private holdings is shown in table 1. Only 6 percent of the private farms are of the full allowable 10 hectare size (Zecevic interview). Thirty-five percent of the holdings are under 2 hectares; 37 percent between 2 and 5 hectares, and 28 percent are over 5 hectares (Simic and Randjelovic).

The extreme fragmentation of private holdings combined with unfavorable state policies have resulted in lower productivity in private agriculture. On land owned by the socialized sector, for example, the average wheat yield in 1980 was 45.8 quintals per hectare and the average corn yield was 64.6 quintals per hectare. In contrast, the average wheat yield on private farms was 28.9 quintals per hectare and the corn yield was 41.9 quintals per hectare (Statisticki Godisnjak Jugoslavije). With 91 percent of the cattle, the private sector produced just 78 percent of the beef, and milk production per cow is said to be 73 percent less than in the social sector (1,200 versus, 4,449 liters per cow in 1980) (Privredni Pregled).

Because of the unprofitability of working such tiny, fragmented farms, there has been a significant migration off the farms to urban industrial jobs. The number of agricultural workers in 1980 was 2.9 million, down from 5.1 million in 1953 (Vinski). While a surplus of labor remains, the problem is that the younger, more educated workers have left the farms, leaving a lack of technical expertise needed to increase productivity. Those remaining on the farms in many cases derive most of their income from employment off the farm and, as a result, do not farm as intensively. In addition, there are roughly 600,000 hectares of arable land that are not cultivated at all, the owners of which have left for urban or foreign employment.

A lack of capital and access to inputs also creates impediments to private farmers. The private sector has a 52-percent share in total agricultural investment, which, in relation to its share of agricultural production, is still inadequate. In 1980, the socialized sector applied 199 kilograms of fertilizer (active ingredient—a.i.) per hectare of arable land, while the private sector used 85 (Statisticki Godisnjak Jugoslavije). The socialized sector has one combine per 52 hectares of arable land, while the private sector has one combine per 124 hectares. Tractor numbers in the private sector have increased dramatically, but even so, only one farm in five has a tractor.

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[2] Author's calculations based on data from Statisticki Godisnjak Jugoslavije.

B. Long-Term Goals of the Kraigher Commission

The Kraigher Commission proposed strengthening the role of the socialized sector and encouraging private farmers to cooperate with the socialized sector. This proposal is not new and conforms to the anti-peasant bias of Yugoslav authorities and their fear that private farms may become too profitable. It has been suggested in the press that the peasant who enlarges his operation through leasing land from others is "getting rich in the wrong way" (Djukic, 1983). Proposals for increasing the maximum size of private holdings have been dismissed as unnecessary.

Expansion of socialized sector holdings.—The primary means for enlarging the socialized sector holdings is the leasing or purchase of land from private holders. In recent years, by far the dominant form of acquisition has been leasing. Of all the land acquired by the social sector between 1976 and 1980, 64.4 percent was leased, averaging 36,000 hectares a year (Pavlovic). Outright purchases in the same period constituted 21.5 percent of all acquisitions, averaging about 12,000 hectares a year. Other means of enlarging the arable land under cultivation by the socialized sector are the reclamation of forest land and flood zones (11.2 percent) and the "restoration of usurped land," or the regaining of land unlawfully seized by the private sector (2.9 percent).

Permanent additions to the land under cultivation by the socialized sector have been minimal in the past decade, and prospects for significant expansion are not good. Land purchases and reclamation have suffered from a lack of funds in recent years, and the future success of such measures will be tied to an increase in agricultural investment. Attempts have also been made to induce aging peasants to deed their land to the social sector in return for a pension. However, at present, such peasants find it more profitable to lease their land to other private farmers.

Formation of cooperatives.—A major goal of the Kraigher Commission is for the majority of private farmers to join into various forms of associations with the socialized sector. Private farmers are encouraged to join cooperatives set up by the Government for the pooling of land, joint purchases of equipment, common marketing and similar purposes. Farmers sign contracts with the cooperative management to produce a given amount of crops or livestock, which they will sell to the cooperatives at preestablished prices. In return, cooperatives provide guaranteed prices on processed food and credit on favorable terms for the purchase of livestock, seed, and other needed inputs. Important benefits of association are inclusion in health insurance and pension plans, since at present most farmers have no insurance or pensions.

While there are about 2.5 million individual farms, only 300,000 farmers now belong to such associations, referred to hereafter as "associated farmers". Farmers complain that even though such cooperatives are supposed to be managed by the farmers themselves, the farmers in fact have very little control over their management and do not benefit from such association. Since prices paid to farmers are set in advance, the farmers do not profit if prices increase by the time their produce is ready for market, and they are not protected against rises in the costs of inputs. Services provided by the cooperatives are said to be inadequate: there is never a veterinarian when needed; fertilizers provided by the cooperative are too little, too late, and too expensive.

Division of labor.—By the year 2000, the socialized sector is to increase its share of livestock inventories to the following levels: 44 percent of cattle, 40 percent of cows, 38 percent of hogs and 42 percent of poultry. The shares of the socialized sector in crop production by the year 2000 are to be: approximately 70 percent of all wheat production, 50 percent of barley production about 30 percent of the corn production, 65 percent of the oilseed production, and 80 percent of sugar beet production.

The Kraigher Commission recommended that the private sector concentrate on livestock production, with the socialized sector dominating in the production of wheat, oilseeds, and sugar beets. The rationale is that the production of livestock is more labor intensive and has long been the activity of private farmers most oriented to the market, and that private farms are already well equipped with the buildings and other infrastructure needed for livestock raising. Private farmers would be encouraged to use their cropland for the production of corn, soybeans, alfalfa, and other natural sources of feed. Mixed feeds would be supplied by the socialized sector.

The socialized sector presently dominates production of oilseeds and sugar beets. However, 60 percent of the wheat crop is produced by the private sector, and there have been difficulties in state wheat procurements due to the reluctance of private farmers to sell wheat at the state prices. The Kraigher Commission proposed that the socialized sector produce enough wheat to meet national food needs, implying that authorities have given up any idea of inducing private farmers to sell more wheat to the state.

Proposed coercive measures.—Many of the Kraigher Commission proposals imply that measures should be taken to make life difficult for private farmers who decline to cooperate with the socialized sector. For example, mixed feed would be provided only to associated farmers; such farmers would be allowed to purchase land up to the maximum 10 hectares and would be allowed to round off their holdings through the addition of adjacent land; and credit for the purchase of machinery would be given only to associated farmers. Laws would be introduced to curb the further fragmentation of holdings and to reduce the amount of idle land. A revision of inheritance laws would allow land to be passed on only to an heir who plans to stay on it and cultivate it. Other measures would include higher taxes on fallow land and severe restrictions on landownership by nonfarmers.

C. Prospects

Prospects for change in the direction outlined by the Kraigher Commission seem minimal. Funds for the purchase and reclamation of land are likely to remain limited, and peasants will probably continue to be unwilling to deed over their land in return for pensions. Promotion of the voluntary association of farmers is a long-standing policy of the State which has not met with favorable results. Most farmers view cooperatives as an arm of the state and see no benefit to be derived from joining. Coercive measures such as those proposed by the Kraigher Commission are only likely to lower productivity further.

The private sector, despite poor access to credit and a general lack of Government support, has done much to increase its productivity, merely using its own resources. During 1965–75, investment grew faster in the private sector than in the socialized (table 1); since then investment has grown at the same rate in both sectors. In addition, the gap in fertilizer use between the two sectors has narrowed considerably since 1965. Nevertheless, fertilizer use in the private sector is still inadequate, due to poor availability. If measures were taken to facilitate the acquisition of fertilizers, machinery and other inputs for private farmers, they could increase their productivity to the point where fewer would be forced to seek non-farm employment.

Farms over 5 hectares in size provide 55 percent of the private production which is sent to the market, while farms under 2 hectares contribute only 15 percent (Simic and Randjelovic). Some of the most successful private farmers are those who, through leasing land from others, have managed to enlarge their operations to 10 hectares. Thus, farmers could benefit from larger holdings. The Kraigher Commission did not make any such proposal; however, some republics have already increased the maximum landholding in the less fertile regions. The maximum holding size might be raised.

IV. INVESTMENT AND INPUTS

During 1965–80, the share of agriculture in total investment stagnated at 6 to 7 percent, while the share of the agricultural sector in total social product was 13–14 percent (table 1). In contrast, agriculture's share in total investment was 15 percent between 1957 and 1961 and 10 percent in the early sixties. During the early seventies, almost the entire increase in agricultural investment was in the private sector, to the point where the private sector share surpassed the social. During 1976–80, the increase in the two sectors' investment were about equal, and agriculture's share in total investment dropped.

TABLE 1.—AGRICULTURAL INVESTMENT

	Million 1972 dinars			Percent		
	Total agricultural investment	Social sector	Private sector	Social share	Private share	Average share in total investment
1966–70	3,693	2,238	1,445	60.6	39.4	6.2
1971–75	5,466	2,608	2,858	47.7	52.3	6.8
1976–80	7,066	3,381	3,685	47.8	52.1	6.1

Note.—$1 equals 27.30 dinars, 1982. Source: Statisticki Godisnjak Jugoslavije.

The goal proposed by the Kraigher Commission is to increase the share of agriculture in total investment to 13 percent as soon as possible. Most of this investment is to be directed to primary production; in the past the larger share of investment went to the food processing industry, whose capacity has been greatly underutilized. The commission proposed that additional investment funds come from organizations of associated labor outside of agriculture and grants from the Government. It also proposed that a system of agriculture credit unions be set up where private farmers could deposit their savings and whose funds would be used exclusively to finance agricultural projects.

To evaluate the feasibility of the planned increase in agricultural investment, one must examine the prospects for overall capital investment. Total investment has seen a steady decline in real terms since 1980: it declined 9.3 percent in 1981 and 6.2 percent in 1982 (OECD). The 1983 plan was for another 6 percent decline. Fixed investments are to continue to decline in real terms through 1985. If Yugoslavia is to stick to its stabilization program, investment will at best increase only slightly between 1985 and 1990. Therefore, if agriculture is to increase its share in total investment, some other sector will have to undergo a very steep decline in investment.

A. Stagnation in Fertilizer Production

In 1982, both consumption and production of fertilizers fell, following increases through 1981 (tables 3 and 4).

TABLE 2.—FERTILIZER USE AND PRODUCTION

	1975	1977	1979	1980	1981	1982
	Kilograms per hectare					
Application rate [1]	72	80	88	82	103	96
	1000 tons a.i.					
Use:						
Total	720	802	870	824	1,010	955
Nitrogen	360	402	440	417	477	490
Phosphorous	197	205	220	209	268	235
Production:						
Potassium	163	195	210	198	265	230
Nitrogen	396	463	497	NA	518	498
Phosphorous	243	278	314	NA	403	371

[1] Per hectare of arable land as defined by the Yugoslavs, including meadows.

Source: Jugoslovenski Pregled, Mar. 1983.

The main feedstock for the production of nitrogen fertilizers is ammonia, and the dominant raw material necessary for ammonia production is natural gas. Until 1978, Yugoslavia was able to produce enough natural gas domestically to cover its needs. But the rise in oil prices led to a greater demand for gas, and in 1978, Yugoslavia began to import gas. Much of the ammonia itself is now imported, and 40 percent of the natural gas used by domestic ammonia plants is imported.

The main raw material for phosphate fertilizers is raw phosphates, all of which Yugoslavia presently imports, as the only domestic phosphate mine is not yet in operation. Phosphoric acid is necessary for the separation of raw phosphates, and for the production of this acid, sulfuric acid is needed. Even though Yugoslavia has the capacity for the production of almost all the necessary sulfuric acid, much of this capacity is unused, and Yugoslavia has been forced to import sulfuric acid as well.

Fertilizer production peaked in 1981 as did imports of needed feedstocks. Raw fertilizer imports reached 505,000 tons that year, up from 315,000 in 1979 (Jugoslovenski Pregled, Mar. 1983, p. 124), so that consumption rose at a greater rate than production. However, in 1982 there was a decline in both the production and import of phosphoric acid and ammonia, with a corresponding decline in the production of all types of fertilizers. Because of efforts to reduce overall imports, imports of fertilizers did not rise sufficiently to offset the decline in production.

Yugoslav authorities are confident that fertilizer production capacity will be enlarged in the next 6 to 7 years; especially that of phosphate fertilizers, so that an annual production of 2 million tons a.i. will be possible (currently well under 1 million tons). The long-term goal envisioned by the Kraigher Commission is an annual consumption of 3 million tons a.i. by the year 2000, or three times the current rate of consumption.

In light of the present economic difficulties in Yugoslavia, it is highly unlikely that such goals can be met. As is the case for all Yugoslav industry, expansion of domestic fertilizer production will be limited severely by shortages of imported raw materials. Imports will continue to be restricted, and hopes for increased domestic capacity for the production of raw materials are dim when one considers the decreased investment planned for the next 2 years.

B. Limited Increases in Irrigation

While Yugoslavia enjoys more rainfall than its East European neighbors, there are regions, notably Kosovo, Macedonia and parts of Vojvodina, which are relatively dry and are in need of irrigation. Irrigation at present covers less than 2 percent of the arable land in Yugoslavia, which authorities agree is inadequate (table 5). The Kraigher Commission proposes that 16 percent of arable land, or about 1.15 million hectares be irrigated by the year 2000. However, those prospects seem dim.

TABLE 3.—*Land under irrigation*

[In thousands of hectares]

1959	89,175
1969	135,205
1979	154,330
1980	144,622
1981	152,695
1982	159,695

Source: Statisticki Godisnjak Jugoslavije.

The Yugoslavs have long had ambitious plans for the expansion of irrigation. Much has been spent on water management projects, the largest being the Danube-Tisa-Danube project in Vojvodina. However, most of these projects are years behind schedule, and land under irrigation has increased little since 1969. The Danube-Tisa-Danube project, for example, was begun in 1957 and was to have provided irrigation for 200,000 hectares by 1985 (Tanjug, July 2, 1981). The main canal network was completed in 1978, but the system of irrigation ditches has not yet been built (Djukic, 1981), and in 1982 only 45,022 hectares in Vojvodina were irrigated, up from 44,729 in 1978. Ambitious projects begun in Kosovo and Macedonia have also fallen behind schedule.

V. PRICES AND PROCUREMENT

The Yugoslav agricultural system suffers not only from inadequate investment and inputs, but also from the lack of an efficient, unified marketing system. Prices of most agricultural commodities are controlled and often do not keep up with production costs. Private farmers are thus reluctant to sell at the state-set prices; as a result socialized purchasing organizations often fall short of procurement goals. Efficiency in the distribution of agricultural production is also hampered by a lack of interrepublic trade.

A. Prices

Prices of many agricultural products are controlled, including those of grains, oilseeds, sugar beets, tobacco, cotton, milk, and livestock products. There are two sets of controlled prices: selling prices, the minimum prices that must be paid by state purchasing organizations to producers, and protective prices, which are guaranteed by the republics and provinces in case producers cannot sell their produce at the selling prices. Protective prices are usually set 10 percent below the selling prices. Republics and provinces are bound to buy surpluses at the protective prices; these surpluses are held in reserve to be released on the market in case of a shortfall in succeeding years.

Several factors are considered in setting selling prices. Prices may be raised in connection with plan targets, to induce producers to plant more of a given crop. Domestic supply and demand and price trends in export markets are also considered. Authorities attempt to set prices at levels assuring producer income but not presenting consumers with prohibitive price increases.

Republics and autonomous provinces are allowed to pay premiums above the selling prices out of their own budgets. For example, the 1982 selling price for wheat was 12 dinars per kilogram, but with premiums paid by republics, the actual price paid for wheat was 13 to 15 dinars per kilogram.

Producer price increases since 1982 have been substantial. Wheat prices in January 1982 were raised 39 percent over 1981 prices and were raised another 25 percent in November 1982. At that time milk prices were raised 19 percent, followed by another rise in 1983 of 12 percent. Price rises in 1983 averaged 13 percent and included a 32-percent rise in the price of sunflower seed and sugar beets, 26-percent increases in the prices of soybeans, and cotton and a 27-percent increase in livestock prices, including a 52-percent rise in hog prices.

Even so, prices have not kept up with increases in the costs of inputs such as feed and energy. Thus, private farmers consider it uneconomical to sell wheat and corn to socialized purchasing organizations at state set prices, even with the republic premiums. They are better off feeding their grain to livestock. The failure of stateset prices to cover the production costs also affects dairies and slaughterhouses, a situation which has led to periodic shortages of milk and fresh meat on the retail market. In contrast, canned meat and sausage, whose prices are not controlled, are plentiful.

The goal proposed by the Kraigher Commission is to retain the system of protective prices and market reserves, but to gradually allow producer prices to be set by market forces and to abolish import barriers, so that domestic market prices will be in line with world prices. Internal producer prices are already somewhat sensitive to the free market through the premiums paid by republics. Allowing market forces to determine the prices of food items such as meat, milk, and bread may prove more difficult. Consumers may resist further price increases, which have already been substantial.

B. Procurement

The problem of state procurement is closely related to the problem of prices. Socialized purchasing organizations must, in order to meet their goals, buy from private farmers, who are often reluctant to sell at the prices set by the government. The solution proposed by the Kraigher Commission is to promote better integration of the private and socialized sectors. However, as pointed out above, this approach has not met with much success.

Most agricultural production which reaches the market in Yugoslavia is purchased, processed, and distributed by the socialized agricultural organizations. Some is marketed directly by private farmers in open air markets. Procurement goals are set separately by each republic or autonomous province, and the socialized purchasing organizations within each republic or province are pressured to meet those goals. Procurement goals are often difficult to meet because private farmer reluctance to sell at Government-set prices. This problem has been most serious for wheat purchases.

In most years, Yugoslavia has produced enough wheat to cover human consumption. Yet, socialized purchasing organizations have failed to purchase sufficient quantities of wheat. Whereas the private sector produces over 60 percent of the wheat, in most years it has sold only 30 percent of its production to state purchasing organizations, using the remainder for livestock feed. The socialized sector in contrast sells over 70 percent of its wheat to state purchasing organizations.

Procurement problems are not as serious with other commodities. The socialized sector produces around two-thirds of the sugar beet and oilseed crops and is thus able to provide the market most of its requirements. There have been occasional problems with corn procurements. However, since most corn is intended to be used by producers as feed for their own livestock, state pruchasing requirements for corn are not as great and are more easily met. Livestock purchases have been a problem, but private farmers have traditionally sold a larger share of their livestock than of their crops to the socialized sector.

Another problem with wheat procurement is the extreme decentralization of the system, with each republic or province setting its own goals. Some republics and provinces, Croatia and Vojvodina in particular, have relatively little difficulty meeting their procurement targets, while others continually fall short. The resulting inequalities are exacerbated by the lack of interrepublic trade. If a republic exceeds its procurement goals, it has a surplus for export, but if it falls short, it is forced to import the difference, using its own reserves of foreign exchange (Danas, June 14, 1983).

The Kraigher Commission proposed shifting most of the grain production to the social sector and strengthening cooperation between the private and socialized sectors. In addition, the Commission favored a more unified market in Yugoslavia, with more interrepublic trade. However, efforts to increase the role of the socialized sector have not been successful. Efforts to promote interrepublic trade are part of a broader discussion of recentralization; to date, there has been considerable resistance to that idea, so progress in that direction will be slow.

VI. CROP AND LIVESTOCK PRODUCTION: SITUATION AND OUTLOOK

In view of difficulties encountered in expanding the socialized sector, combined with continuing shortages of crucial imputs, it seems unlikely that the Kraigher Commission's ambitious production goals for the year 2000 can be met. Projections for 1990 indicate significant increases in oilseed production, but only modest increases in grain production. Since the gains in oilseeds will be offset by reduced imports, the availability of livestock feed will continue to be limited. Thus, dramatic increases in livestock production cannot be expected.

A. Crop Production

Total crop production is likely to increase at a moderate rate through the rest of the decade. The rapid production increases during the seventies and early eighties resulted from significant gains in yields achieved for all crops. Production increased despite the steady decline in areas for most crops. Further yield increases are unlikely to be as fast due to the probability of continued shortages of crucial inputs. The decline in area planted to grains has recently slowed, while the area planted to soybeans has actually doubled.

Grains.—Projections of 1990 grain yield were based on linear time series trends and an assumption that growth rates will continue to decline (table 4 and 5). Due to continuing inadequate investment and input shortages, yield increases for all grains will probably not be as great in the eighties as during the seventies.

TABLE 4.—AVERAGE ANNUAL GROWTH OF GRAIN YIELDS

[In percent]

Period	Wheat	Corn	Total grain
1966–70 [1]	5.4	5.8	5.4
1971–75	4.1	2.8	3.5
1976–80	2.8	3.2	3.2
1990 (projection) [2]	1.8	2.2	2.2

[1] Average annual increase over previous five year average.

[2] Projected annual increase over 1976–80 average.

Source: Calculations based on data from Statisticki Godisnjak Jugoslavije.

The Kraigher Commission envisioned a sharp decline in the area planted to wheat, accompanied by substantial yield increases. This plan might be feasible if most wheat production were shifted to the socialized sector, where yields are sharply higher. However, such a shift is unlikely, so yield increases will probably be more modest. If Yugoslavia is to maintain self-sufficiency in grains, given table 5 yield projections, the area cannot decline to less than 1.35 million hectares. This wheat area would give a crop of 5.5 million tons.

The area planted to corn has been stable at about 2.3 million hectares since 1978. If this area continues unchanged, the expected yield increase will give a crop of 12 million tons in 1990.

TABLE 5.—GRAIN PRODUCTION, AREA, AND YIELD

Year	Wheat	Corn	Barley	Total grains
	1,000 tons			
1971–75 average	5,177	8,209	625	14,494
1976–80 average	5,303	9,192	664	15,548
1981	4,270	9,807	720	15,230
1982	5,218	11,126	669	17,412
1985 (plan)	6,000	12,000	800	20,000
2000 (plan)	7,000	20,500	1,500	NA
1990 (projection)	5,500	12,000	700	19,000
	1,000 hectares			
1971–75 average	1,801	2,360	318	4,854
1976–80 average	1,616	2,256	297	4,462
1981	1,386	2,297	310	4,254
1982	1,558	2,246	284	4,330
1985 (plan)	NA	NA	NA	NA
2000 (plan)	1,100	2,700	350	NA
1990 (projection)	1,350	2,250	256	4,200
	Quintals/hectares			
1971–75 average	28.7	34.8	19.5	29.9
1976–80 average	32.8	40.7	22.2	34.9
1981	30.8	42.7	23.3	35.5
1982	33.5	49.5	23.6	40.2

TABLE 5.—GRAIN PRODUCTION, AREA, AND YIELD—Continued

Year	Wheat	Corn	Barley	Total grains
2000 (plan)	63.6	75.9	42.9	NA
1990 (projection)	40.7	53.3	27.5	45.2

NA = Not available.

Sources: Statisticki Godisnajak Jugoslavije; Savezni Zavod za Statistiku, Indeks; Kraigher Commission; 1990 projections EE-USSR Branch.

Oilseeds.—Traditionally, the dominant oilseed crop in Yugoslavia has been sunflower seeds (table 6). The 1981-85 plan drafted in 1982 called for a 1985 sunflower crop of 850,000 tons and a soybean crop of 180,000 tons. Since then, however, the trend has been reversed. The sunflower crop has been seriously affected by the fungal disease phomopsis. As a result, the area planted to sunflower fell from 194,000 hectares in 1981 to 140,000 in 1982 and 76,000 in 1983, and production fell from 327,000 tons in 1981 to 139,000 tons in 1983. Soybean production tripled in 1981 and doubled again in 1982. The increases in soybean plantings were in response to substantial price increases and favorable credit terms for the purchase of machinery and fertilizers.

The 1984 plan calls for 150,000 hectares to be planted to sunflower and another 150,000 hectares to soybeans. Because of the heavy emphasis being given to soybeans, that plan may well be met. However, while a number of agricultural institutes have researched phomopsis, it is unlikely that a disease resistant strain will be widely available soon. Until that time, farmers will probably be unwilling to plant such a large area to sunflowers.

The soybean crop could be as high as 400,000 tons, and sunflower seed production could reach 350,000 tons. Thus, total 1990 oilseed production will approach 900,000 tons.

TABLE 6.—CROP PRODUCTION, AREA, AND YIELDS

Year	Soybeans	Sunflowers	Rapeseed	Total oilseeds	Sugar beets
			1,000 tons		
1971-75 average	13	326	13	352	3,617
1976-80 average	56	433	60	549	5,258
1981	92	327	65	485	6,224
1982	198	202	79	479	5,671
1985 (plan)	180	850	130	1,160	9,500
2000 (plan)	NA	NA	NA	2,000	10,500
1990 (projection)	400	350	120	870	6,525
			1,000 hectares		
1971-75 average	8	195	7	210	92
1976-80 average	29	214	28	251	125
1981	48	196	31	275	147
1982	77	138	44	259	139
1985 (plan)	NA	NA	NA	NA	NA
2000 (plan)	NA	NA	NA	850	180
1990 (projection)	180	175	50	405	150
			Quintals/hectares		
1971-75 average	14.6	16.7	19.1	16.7	391
1976-80 average	17.6	20.0	21.5	21.8	423
1981	19.4	16.7	20.9	17.6	423

TABLE 6.—CROP PRODUCTION, AREA, AND YIELDS—Continued

Year	Soybeans	Sunflowers	Rapeseed	Total oilseeds	Sugar beets
1982	25.6	14.6	18.1	18.4	407
2000 (plan)	NA	NA	NA	21.6	NA
1990 (projection)	22.2	20.0	24.0	21.4	435

NA = Not available.

Sources: Statisticki Godisnjak Jugoslavije; Savezni Zavod za Statistiku, Indeks; Kraigher Commission; 1990 projections, EE-USSR Branch.

Sugar beets.—Sugar beet production fell sharply in 1982, to 5.7 million tons, from a record 6.2 million tons in 1981. Yields have declined because of poor weather and a shortage of pesticides; acreage has been below plan because of reluctance of private farmers to plant sugar beets. A rebound is possible, with 1990 production reaching 6.5 million tons, if producers are assured of acceptable prices and better access to chemicals.

B. Livestock and Livestock Products

Growth in livestock production has been limited in the past decade because of tight feed supplies. With the increase in oilseed production projected to 1990, there should be some increase in livestock production. However, since oilseed imports are expected to decline, significant increases in feed supplies cannot be expected. Consequently, the increases in livestock production projected by the Kraigher Commission will most likely not be possible.

In 1983, there were declines in cattle and hog inventories and increases in sheep and poultry (table 7). Cattle numbers have declined since 1976, while sheep numbers have declined in most years since 1970. Hog inventories have fluctuated, but with a general upward trend averaging 2 percent annually during the seventies. During the same period, poultry numbers increased at an average rate of 3.6 percent per year, but with a gradually declining rate of growth an average annual increase of 2.5 percent is projected during the rest of the eighties. Growth in hog numbers averaged 3.8 percent per year between 1980 and 1983; thus, hogs will likely continue to increase at an average rate of 2 percent per year. The decline in cattle numbers should be reversed, allowing their number to increase back to the 1976-80 average by 1990. There will probably not be much increase in sheep numbers.

The table 7 projections are based on the assumption that recent declines in livestock inventories can be reversed. The main reason for the declines has been the tight supply of oilseed meal used for feed, a large portion of which must be imported. The dramatic increases planned for soybean production, combined with an expected rebound in sunflower seed production, should make it possible to reduce meal imports. However, increases in livestock inventories called for by the Kraigher Commission would require continued high meal imports, which, due to the tight financial situation, the Yugoslavs most likely would not tolerate.

Realization of the Kraigher Commission's goals for livestock products would require that 1990 production reach 2.3 million tons of meat, 9.2 billion liters of milk, and 5.2 billion eggs. Production at this level would require oilseed and meal imports, measured in soybean meal equivalent, to continue at 400,000 tons per year (meal imports came to 500,000 tons in 1981), even with a soybean crop of 400,000 tons. With a 1990 grain crop of 19 million tons, production at the above levels would require net grain imports of over 1 million tons.

The table 8 1990 projections mean an average rate of increase of just 1.7 percent from the 1976–80 average and are consistent with the desire of the Yugoslavs to achieve net exports of grain and greatly reduce oilseed and meal imports. Attainment of the projected 1990 livestock production levels would require meal imports of about 150,000 tons and would allow net grain exports of about 700,000 tons.

TABLE 7.—JANUARY LIVESTOCK NUMBERS

[In thousands of head]

Period	Cattle	Cows	Hogs	Sheep	Poultry
1971–75 average	5,441	3,540	6,840	8,166	49,484
1976–80 average	5,575	3,181	7,513	7,504	59,752
1981	5,474	3,086	7,867	7,384	65,690
1982	5,464	3,079	8,431	7,398	67,408
1983	5,351	3,050	8,370	7,452	69,680
2000 (plan)	9,000	4,500	16,000	20,000	120,000
1990 (projections)	5,500	3,100	10,000	7,400	80,000

Sources: Statisticki Godisnjak Jugoslavije; Savenzni Zavod za Statistiku, Indeks, Kraigher Commission; 1990 projections, EE–U.S.S.R Branch.

TABLE 8.—LIVESTOCK PRODUCTS

	1980 production	1990 projection	2000 plan
Total meat (1,000 tons)[1]	1,500	1,800	3,180
Milk (million liters)	4,400	4,900	14,000
Eggs (million units)	4,900	5,200	8,000

[1] Carcass weight, includes fat and offal.

Sources: Kraigher Commission; 1990 projections, EE–U.S.S.R. Branch

VII. AGRICULTURAL TRADE

The agricultural sector is an increasingly important source of export earnings for Yugoslavia. Yet, in recent years there have been substantial deficits in agricultural trade. Among the Kraigher Commission goals are a reduction of agricultural imports and large increases in agricultural exports. The deficit has been narrowing, and the Yugoslavs have been making good progress in reducing imports. In view of the unfeasibility of the commission's production goals, however, its export goals are unlikely to be met.

Major agricultural export items are meat and livestock, poultry, vegetables, refined sugar, fruits, wine, tobacco, and corn. Principal buyers for young beef and lamb are Italy, Greece and the Middle Eastern countries. Processed meat is shipped primarily to the Soviet Union and the United States. Poultry goes to the Soviet Union, the United Arab Emerites and Egypt, while the major purchasers of tobacco are the United States and the Federal Republic of Germany. Corn in the past has been sold mainly to Soviet Bloc countries.

Major agricultural imports are coffee, cotton, hides and skins, oilseed meals, oilseeds, edible oils, sugar, tropical fruit, fish meal, and wheat. Yugoslavia also imports cheaper grades of beef, mainly used in the processing industry.

A. Imports

Since 1980, agricultural imports have been reduced considerably, mainly because of reduced imports of grain, fruit and coffee. Further reductions in imports can be expected by 1990 because of declines in oilseed imports.

Grain imports exceeded 1 million tons in 1979, 1980 and 1982 because of difficulties in procurement (table 9). Since 1980, however, there have been no corn imports, and rather substantial exports were realized in 1982 and 1983. Wheat imports, high in 1982, will most likely be sharply reduced by 1984, due to improved domestic production in 1983. The Yugoslavs should be close to meeting their goal of eliminating wheat imports by 1990.

Imports of oilseeds, meal and vegetable oil have been substantial in recent years. Oilseed imports fell slightly in 1982, but imports of meal, vital for the production of animal feed, have continued to rise. Even with such high levels of imports, there are still shortages of vegetable oil and fodder. The hope is that with further increases in the soybean crop and a recovery of sunflower crop, these imports can be significantly reduced in the coming decade.

Imports of other products fell in 1982. Imports of coffee and tropical fruit have been decreasing since 1980 as part of the effort to improve the trade balance. The restriction of coffee imports has resulted in serious shortages.

TABLE 9.—AGRICULTURAL IMPORTS

[In thousands of metric tons]

	1977	1978	1979	1980	1981	1982
Corn	(1)	106	1,094	(1)	(1)	383
United States	(1)	106	1,094	(1)	(1)	383
Wheat	519	1	413	1,347	408	765
Bulgaria	(1)	(1)	13	150	94	248
United States	(1)	(1)	313	1,061	162	221
Oilseed	90	239	266	237	275	228
United States	69	215	243	202	227	206
Soybean meal	211	162	90	148	177	215
United States	86	82	51	132	156	NA
Sugar	79	(1)	(1)	84	155	[2]36
Tropical fruit	285	260	269	191	146	100
Raw cotton	104	123	99	109	100	108
Egypt	2	11	7	10	11	11
U.S.S.R.	77	88	64	77	67	62
Coffee	(1)	46	58	49	48	24

[1] Negligible or zero.

[2] January to November only.

NA = Not available.

Sources: Statisticki Godisnjak Jugoslavije, 1982; Jugoslovenski Pregled, Dec. 1983; Indeks, Aug. 1983.

B. Exports

The most important agricultural exports are livestock and meat (table 12). Next in importance has been corn exports, exceeding 1 million tons in 1983. The Kraigher Commission places great hope in expanded meat exports. However, projected livestock production does not warrant such optimism. Corn exports will most likely remain high, but will not expand. For both commodities, it may also prove difficult to find a market for expanded exports.

Meat exports came to around 100,000 tons in some of the years between 1977 and 1982. The physical volume of meat exports dropped sharply in 1981, after Greece, a major purchaser of baby beef, joined the EC. However, it increased somewhat in 1982, when both Italy and Greece lowered their barriers to imports of beef from Yugoslavia (Jugoslovenski Pregled, Dec. 1983, p. 460–61).

The goal for 1985 outlined in the 1981–85 five year plan is for meat exports to reach 127,000 tons, including 86,000 tons of beef, 20,000 tons of pork and 10,000 tons of poultry (Kraigher Commission). The Kraigher Commission proposes exports of 350,000 tons of beef, 150,000 tons of pork and 100,000 tons of poultry for the year 2000. In view of the unfeasibility of the livestock production goals, these exports targets are unlikely to be realized. The 1985 goals of 86,000 tons of beef exports was formulated before the sharp fall in exports in 1981; while beef exports are recovering, they probably won't reach 86,000 tons by 1985, although they may come close to that by 1990. Poultry exports for January to November, 1982 were 15,600 tons, so the 1985 goal seems easily attainable. Pork exports are presently close to nonexistent, and projected production does not allow for exports.

TABLE 10.—AGRICULTURAL EXPORTS

[In thousands of metric tons]

	1977	1978	1979	1980	1981	1982
Fresh meat (red)	62	76	48	61	26	53
Greece	40	52	34	39	2	9
Italy	14	14	13	13	16	20
Processed meat	21	31	30	34	42	46
United States	10	19	15	9	10	12
U.S.S.R.	3	4	6	17	20	26
Corn	326	158	20	273	220	205
Bulgaria	(1)	(1)	(1)	16	45	4
Czechoslovakia	1	8	1	35	15	57
Romania	40	77	(1)	83	37	55
U.S.S.R.	70	39	3	33	37	28
Switzerland	20	(1)	(1)	51	14	23
Bulls	88	12	20	19	35	36
Italy	7	12	19	18	24	24
Wine	78	82	107	112	133	153
Tobacco	19	27	26	25	22	25

[1] Negligible or zero.

Source: Statisticki Godisnjak Jugoslavije, 1982; Savezni Zavod za Statistiku, Indeks, 8, 1983; Jugoslovenski Pregled, No. 12, 1983.

C. Trade Balance

There has been a deficit in agricultural trade in every year since 1975, due mostly to high imports of cotton, oilseeds and grain (table 11). The deficit was worst in 1979 and 1980, when grain imports (corn imports in 1979 and wheat imports in 1980) exceeded one million tons.

The gap between imports and exports has been narrowing in recent years. In 1981, the deficit was cut by 32 percent, and in 1982 it plummeted, falling 80 percent. The Yugoslavs are making concerted efforts to increase agricultural exports, particularly meat exports, and to reduce imports. The result, however, has been periodic meat shortages on the domestic market and serious shortages of vegetable oils and protein feed, which must be imported.

TABLE 11.—YUGOSLAVIA'S AGRICULTURAL TRADE IN VALUE

	1977	1978	1979	1980	1981	1982
Million dollars:						
Exports	595	712	814	1,074	1,093	1,232
Imports	1,132	1,067	1,519	1,641	1,477	1,316
Balance	−537	−355	−705	−567	−384	−84
Percent:						
U.S. share of imports	6.4	10.3	21.5	15.9	12.9	13.6

Source: FAO Trade Yearbook.

Prospects for further improvement in the agricultural trade balance are limited. Projected levels of grain and livestock production for 1990 allow for net grain exports of 700,000 tons, equal to 1983 exports. Small amounts of wheat will most likely continue to be imported, while corn exports could remain at the present 1 million ton level but will probably not increase much. Meat exports could reach 125,000 tons by 1990. Exports on this level, however, would allow per capita consumption to rise by only 1.2 percent per year, down from an average annual increase of 4.7 percent during the seventies. This slower increase is likely because of recent declines in per capita real income and a slow economic recovery. Finding a market for that quantity of meat could be a serious problem. The EC market cannot be expected to expand much; therefore exports will have to be directed to the Soviet Union and the Middle East. Oilseed and meal imports are projected to decline to about 150,000 tons soybean meal equivalent by 1990, but cannot decrease to less than that. There are no current plans to reduce cotton imports.

D. U.S. Agricultural Trade With Yugoslavia

The major commodities which the Yugoslavs purchase from the United States are wheat, corn, soybeans, oilseed meal and vegetable oil with the United States supplying virtually all the corn and soybeans imported by Yugoslavia (table 9). The U.S. share in Yugoslav agricultural imports was largest in 1979 and 1980, which were the years that Yugoslavia imported exceptionally large quantities of grain (table 14).

In 1983, Yugoslavia received U.S. export credits totaling $235 million guaranteed by the Commodity Credit Corporation (CCC).

The credits were allocated for purchases of wheat, oilseeds, protein meal, vegetable oil, and cotton. The credit led to considerably higher purchasers of wheat, oilseeds and meal than in previous years, as well as purchases of cotton for the first time.

The U.S. share in Yugoslav agricultural imports will depend on continued willingness to grant CCC credit guarantees. The Yugoslav financial situation will remain tight, and Yugoslavia will import from suppliers providing the most favorable terms. Continued credit will assure continued sales of oilseeds and protein meal; however, wheat exports to Yugoslavia will most likely decline in any case since import needs are expected to decline.

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REGIONAL SUMMARY

ECONOMIC POLICIES AND SYSTEMS IN EASTERN EUROPE AND YUGOSLAVIA: COMMONALITIES AND DIFFERENCES

By Paul Marer*

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*School of Business, Indiana University. This chapter attempts to provide a synthesis of the economic situation in Eastern Europe. The author has benefited from reading of all of the chapters in these three volumes. The interpretations and conclusions reached are, however, those of the author rather than any of the other contributors or that of the Joint Economic Committee of the Congress. I would like to thank especially John Hardt for comments on the first draft and my daughter, Eva, for helping me design and the Congressional Research Service for preparing the charts.

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I. INTRODUCTION

During the postwar period the six East European countries* and Yugoslavia became increasingly dependent on the world economy. This is the result not just of the dramatic increase in East-West trade and finance during the 1970s, but of the rapid expansion of East Europe's total trade, i.e., with the West and East combined. As small- and medium-sized countries with limited domestic resources and markets, they can grow rapidly only as long as they are able to increase imports. During the 1970s the seven countries pursued a strategy of import-led growth. Particularly strong enthusiasts for the strategy were Poland, Hungary, and Yugoslavia. Since only a portion of the seven countries' import needs could be obtained from within the region, they turned to the West, purchasing technology as well as raw materials and intermediate products, a significant portion on credit. The fast pace of these countries' economic development programs well into the 1970s and their relatively low capacity to export manufactured goods to the West that can be traced to the peculiar institutional environment in which their firms operate, are responsible first and foremost for East Europe's rapidly growing dependence on the world economy, and therefore vulnerability to its changes.

World economic conditions affect East Europe's economic relations with the East also, although the transmission mechanisms differ from those in East-West trade. How the East European countries became increasingly dependent on the world economy during the last decade, what triggered and how they have responded to the balance-of-payments (BOP) crises that many of them have faced in recent years, and their economic and political prospects are the main themes developed in the contributions to these three volumes, from a variety of perspectives.

This essay summarizes the main theme of these three volumes: the chief common causes and consequences of the BOP crisis faced by the East European countries in recent years. Because any generalization that lumps together this diverse group is an oversimplification, the analysis is supplemented by short essays on each country, highlighting the distinctive systems and policy features of each, and their impact on performance.

II. INCREASED DEPENDENCE OF EAST EUROPE ON THE WORLD ECONOMY AND CONSEQUENCES

A. Causes of the Large Hard-Currency Debt

During the 1970s the East European countries accumulated large convertible-currency debts. Although there were significant differences between them in the (standardized) amounts they borrowed and in the relative importance of the reasons that explain them, the following generalizations are broadly valid for the region.

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*East Europe is comprised of the countries of Bulgaria, Czechoslovakia, the German Democratic Republic (GDR), Hungary, Poland and Romania. Since this definition is geopolitical, i.e., it refers to the group of countries allied with the USSR, Yugoslavia is not considered an East European country.

First, the East European leaderships made policy decisions to try to stem the secular decline in the growth rates of total output and productivity that became evident by the late 1960s by importing more Western technology. This policy decision was facilitated by the emerging detente between the Soviet Union and the West. With the help of imported technology they intended to modernize their industries and increase the competitiveness of their exports on Western and Eastern markets. The accelerated importation of Western technology forced a rapid expansion of complementary imports from the West to operate the new capacity because the needed inputs were not available in sufficient quantities or quality from domestic and CMEA [1] sources. A significant portion of the imports from the West was obtained on credit. When after 1973 the East European countries faced the first energy price explosion (Poland and Romania, as net energy exporter at the time, did not suffer) and the ensuing Western recession, policymakers concluded that the domestic economy should be shielded from "temporary" adverse developments in the world economy. Most countries compounded this mistake by concluding that the appropriate response to the external shocks was to try to maintain or accelerate the already rapid growth rates of domestic production and did so without adjusting significantly the structure of output to post-1973 scarcities on the world market. Simultaneously, they also tried to maintain a fast tempo of growth of domestic consumption. These policy decisions contributed significantly to East Europe's rapid growth of indebtedness, especially during the second half of the 1970s (Chart 1).

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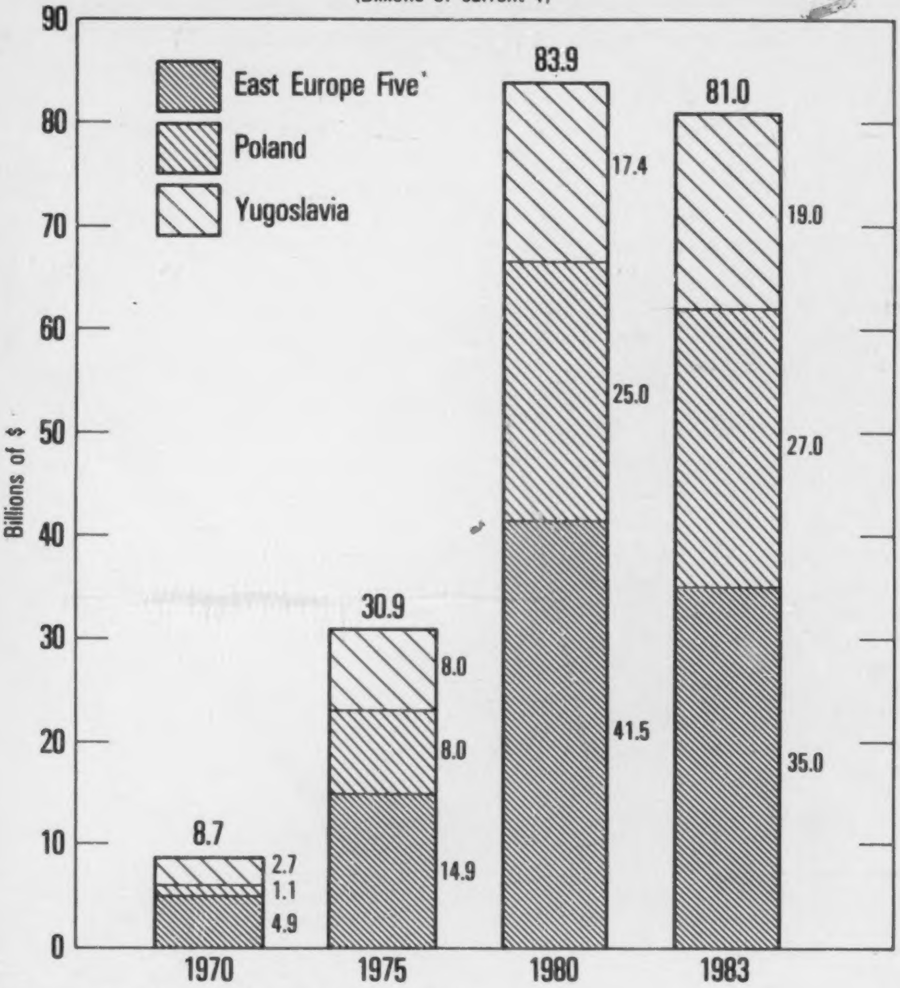
[1] Council for Mutual Economic Assistance, whose European members are the USSR and the six East European countries listed in the previous note. CMEA's non-European members are Cuba, Mongolia and Vietnam. In this essay the CMEA refers to the group of its seven European members.

Chart 1.

Gross Hard Currency Debt of East Europe and Yugoslavia, Year-End 1970, 1975, 1980, and 1983

(Billions of current $)



* Bulgaria, Czechoslovakia, GDR, Hungary, Romania

Source: 1970 and 1975 [Lenz]; 1980 and 1983 [Wharton], April 13, 1984.

Second, the BOP of these countries was also adversely affected by the shortcomings of their centrally planned economic (CPE) system, in Yugoslavia by the inefficiences of its decentralized self-management system. Continued priority given to output rather than profit maximization, the "soft budget constraint" that enables inefficient producers to prosper through government subsidies, and distorted prices that give the wrong signals, have had adverse consequences on their BOP. Insufficient attention to costs encourages the hoarding and excessive use of materials so that imports are higher than necessary. Output maximization and the soft budget constraint are important reasons why too many investment projects are started by enterprises and by the center, also swelling imports. Lack of effective domestic and import competition hinders product innovation and flexible adaptation to customer preferences. How can producers compete successfully on the world (and to some extent also on the CMEA) markets with their manufactures if they have not had reasons to master those skills on the domestic market in the first place?

Third, the East European economies were affected by world and regional trade and financial conditions: changes in the terms of trade (price index of exports relative to the price index of imports), demand and supply conditions in the main trade partner countries, and the cost and availability of foreign credits.

Terms of trade are determined mainly by changes in relative world market prices; these affect East Europe's trade with the West immediately and with the CMEA countries with a lag because the CMEA pricing formula is based on a five-year moving average of world market prices. During the last decade East Europe's terms of trade with the West and the CMEA (mainly the USSR) worsened considerably; with the Soviet Union they would have deteriorated sooner if they would have been forced to pay current world market prices immediately after the first and second energy price explosions; the difference may be considered implicit subsidy granted by the Soviet Union to Eastern Europe, in varying amounts.

Demand conditions in the West for East European exports are largely a function of the trade partners' rate of economic growth, level of unemployment, and status of BOP. After 1975 economic conditions deteriorated considerably in the West and in the less-developed countries (LDCs), affecting adversely East European exports. To be sure, the ability of an exporter to adapt quickly as a supplier to changing demand conditions plays a role and affects the exporter's terms of trade also.

Demand conditions in the East depend partly on the kinds of commodities the exporter offers since demand for "hard goods" (those that can be sold easily to or must be purchased from the West) is practically unlimited whereas demand for the "softer" investment and consumer manufactures is influenced by the trade partner's economic situation. Since in recent years all the CMEA countries have been facing hard-currency BOP problems, intra-CMEA trading conditions have worsened also. On the one hand the pressure on the exporting countries has become stronger to reorient their supply of hard goods to the West; on the other, the austerity programs have reduced their demand for each other's goods, especially for machinery.

The availability and costs of Western credits favored the accumulation of East European debt until about 1979. Banks were eager to lend some of the newly-deposited OPEC surplus funds to CPEs whose planners were thought to be decisively in command of their exports, imports and thus BOP. East Europe was believed to be under the Soviet Union's "financial umbrella." Western governments were willing to lend to promote their countries' exports. Between 1974 and 1979 real interest rates (nominal interest rates adjusted for world inflation) were zero or negative, making it appear sensible to be a large borrower. But after 1979, anti-inflation policies in the West and growing economic and political uncertainties caused by the severe debt-servicing problems of an increasing number of countries helped raise nominal as well as real interest rates. This increased dramatically the interest payable on much of East Europe's (as well as many other countries') large debt. During the early 1980s, several East European countries could not make debt service payments as scheduled. This, along with the uncomfortably large debt burdens accumulated, the general uncertainties in international finance, and the deteriorating East-West political environment in the wake of the Soviet march into Afghanistan and the imposition of martial law in Poland, all contributed to trigger a Western credit squeeze on Eastern Europe. This meant a sharp reduction of short-term and a more gradual curtailment of medium- and long-term credits—not only new loans but also loan rollovers that for years were routinely granted. In several East European countries smoldering BOP problems flamed into crises.

B. Options To Deal With the Balance-of-Payments Crises

If a country wants to, or must improve its BOP because continued deficits cannot be financed, this has implications for its economic policy and performance. When a government can no longer borrow abroad, what happens if it refuses to take corrective economic action? In such cases adjustment occurs anyway, triggered by unavoidably severe cuts in imports. In small- and medium-sized countries especially, import restriction will cause or exacerbate shortages and (open or repressed) inflation, leading to a deterioration in production and increased (open or hidden) unemployment. Therefore, failure to adjust (in the sense of failure to use the instruments of economic policy to improve resource allocation) cannot be a solution in the long run [de Larosiére].

The essence of forced or voluntary adjustment is an improvement in the "current acccount" of the BOP. An example best explains this. Let us assume that in a given year a country wants to, or is forced, to repay on a net basis 10% of its $10 billion debt, or $1 billion. This means that it must generate a $1 billion "current account" surplus in its BOP.[2] Assuming that it must also pay, say a 10% interest on its total outstanding debt, the net balance of its "goods and services" account must be in $2 billion surplus ($1 billion repayment + $1 billion interest). Another way of stating this is that the country can domestically "absorb" $2 billion less than it produces. If the country's GNP is $40 billion, then 5% of its total production of goods and services must be transferred to the rest of the world in the form of an export surplus.[3]

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[2] Assuming that the country's gold and foreign exchange reserves cannot be reduced and that the financial claims on exports will be collected fully within the period.

The need to generate an export surplus requires two kinds of policy choices: first, a combination of export expansion and import reduction (and the policy measures to achieve them) and, second, decisions on the components of domestic absorption (basically, the sum of consumption and accumulation) that are to be held down to free 5% of output for net exports. The two decisions are obviously interrelated.

Regarding the choice between export expansion and import reduction, because a large part of the manufactures East Europe produces is not competitive on the world market, and also because external demand has been weak, policymakers typically had to cut imports, with adverse consequences for production levels. Reorienting trade from the West to the East on a substantial scale is not a viable option since imports from the West were purchased because the goods were not available from the CMEA in the first place.

As to the options for holding absorption below output, the basic choice is between consumption and net investment (accumulation). Reigning in consumption is a difficult choice because in most countries it has adverse political consequences; cutting investment is undesirable because it reduces future economic and export potential. Consumption can be restricted through administrative measures, such as rationing or lengthened queues and taxes, or inflation that is not overtaken by income increases. Investment, too, may be controlled administratively or by increased prices and taxes.

Improving the efficiency of the economy makes it easier to deal with a BOP crisis and is a key component of IMF-backed adjustment programs. Improved efficiency means that producing units will search and find ways to lower costs an thus save on imports; it also means that more products become internationally competitive, so exports can be increased. Greater efficiency means that a smaller investment volume will generate more and better quality output, and usually more quickly. The CPEs of East Europe and Yugoslavia have potentially large reserves that could be mobilized this way. This, however, would require the kinds of fundamental reforms in their economic systems that they have found very difficult to implement in the face of opposition based on ideology, politics bureaucracy, and vested interests.

C. Resolution of the Debt Crisis

The six East European countries and Yugoslavia combined transformed a 1979 hard-currency trade deficit of $10 billion into a 1983 trade surplus of $5 billion—a $15 billion improvement over five years. East Europe's exports increased only from 1979 to 1980; since then the value of exports has remained unchanged at $37 billion. Imports were cut from $47 billion in 1980 to $33 billion in 1983.

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[3] If a country defaults, it will be unable to finance much of what it normally imports; if it reschedules, it can obtain partial temporary relief on debt service, as the net resource transfer to the rest of the world may be reduced, but at the cost of larger future transfers.

The improvement in the trade balance was achieved by major reductions in the growth or absolute level of output and even greater reductions in domestic absorption. Output slowed partly because that was planned and partly as the unforeseen result of bottlenecks, created by import restrictions. Today there is considerable unused capacity in the region, though this has not resulted in significant reduction in employment.

For most countries there are no reliable estimates of growth rates because of conceptual and statistical problems of measurement. Nevertheless, the trends are revealed by both the official growth indices (believed to be upward biased in varying degrees for most countries) and Western recomputations (more comprehensive coverage and different sectoral weights, but marred by gaps and data problems in the official primary statistics on which they are based) (see [Marer-85]); both are shown in Table 1. According to official data, "produced" national income declined in the seven East European countries combined from 7.4% in 1971–75 to 4.5% in 1976–80 to less than 1% in 1981 and 1982 and then recovered to 2.6% in 1983; according to Western-computed GNP, for the six East European countries only, the decline was from 4.6% in 1970–75 to 2.1% in 1976–80 to stagnation in 1981 and 1982 and slight growth in 1983 (unweighted average of the country growth rates) [Alton].

TABLE 1.—GROWTH OF GROSS NATIONAL PRODUCT AND NATIONAL INCOME PRODUCED, NATIONAL INCOME USED, AND CONSUMPTION AND NET INVESTMENT, 1971–83

[Average annual growth in real terms, percent]

Country	1971–75	1976–80	1981	1982	1983
Gross National Product Produced					
Bulgaria	4.4	1.2	2.9	2.9	−1.6
Czechoslovakia	3.4	2.1	−1.1	0.4	1.0
GDR	3.5	2.4	2.4	0.6	1.8
Hungary	3.4	2.3	0.3	1.7	−0.3
Poland	6.6	0.9	−5.4	−4.0	4.4
Romania	6.2	3.9	0.6	2.7	0.3
EE–Six (unweighted)	4.6	2.1	−0.5	.7	0.9
National Income (Net Material Product) Produced					
Bulgaria	7.8	6.1	5.0	4.2	3.0
Czechoslovakia	5.7	3.7	−0.1	0.2	2.4
GDR	5.4	4.1	4.8	2.6	4.4
Hungary	6.2	3.2	2.5	2.6	0.3
Romania	11.2	7.3	2.2	2.7	3.4
Poland	9.8	1.2	−12.0	−5.5	6.0
Yugoslavia[1]	5.9	5.6	1.4	0.5	−1.3
EE–Seven (unweighted)	7.4	4.5	0.6	1.0	2.6
National Income (Net Material Product) Absorbed Domestically					
Bulgaria	8.6	2.8	7.7	1.9	1.2
Czechoslovakia	6.1	2.2	−3.4	−1.6	0.7
GDR	4.7	3.6	1.3	−3.4	0.3
Hungary	5.6	1.9	0.7	−1.1	−2.7
Poland	11.6	−0.2	−10.5	−10.5	5.4
Romania	n.a.	6.9	−5.7	−2.2	0.7
Yugoslavia[1]	6.2	5.4	−0.7	−1.7	−2.6

TABLE 1.—GROWTH OF GROSS NATIONAL PRODUCT AND NATIONAL INCOME PRODUCED, NATIONAL INCOME USED, AND CONSUMPTION AND NET INVESTMENT, 1971–83—Continued

[Average annual growth in real terms, percent]

Country	1971–75	1976–80	1981	1982	1983
EE–(excluding Romania)	7.1	2.6			
EE–Seven		3.2	−1.5	−2.8	0.4
National Income Used for Consumption					
Bulgaria	7.0	4.0	5.3	3.7	2.9
Czechoslovakia	5.3	2.5	2.6	−1.1	2.7
GDR	5.3	3.8	2.7	1.2	0.8
Hungary	4.7	3.1	3.0	1.4	0.6
Poland	8.7	4.5	−4.6	−11.5	5.6
Romania	n.a.	7.1	3.1	−1.3	0.1
Yugoslavia	6.9	5.4	−1.6	−0.2	−0.6
EE–(excluding Romania)	6.3	3.9			1.7
EE–Seven		4.3	1.5	−1.1	
National Income Used for Net Investment (Accumulation)					
Bulgaria	12.9	0.1	14.8	−3.3	−3.6
Czechoslovakia	8.4	1.4	−21.7	−3.6	−7.2
GDR	2.9	3.0	−3.4	−19.9	−1.9
Hungary	8.1	−2.0	−8.6	−12.4	−20.4
Poland	18.1	−11.8	−27.6	−6.6	4.9
Romania	n.a.	6.6	−22.1	−4.3	2.0
Yugoslavia (gross [1])	5.5	5.4	0.5	−4.0	5.7
EE–(excluding Romania)	9.3	−0.7			
EE–Seven		0.4	−9.7	−7.7	−4.6

[1] Gross material product.

Sources: GNP: Alton study in this volume; Table 19; all other series: official national statistics as reported in Wharton Econometric Forecasting Associates, Centrally Planned Economies Current Analysis, December 24, 1984 and March 27, 1985.

During 1981–83, domestic absorption—distributed to consumption (public and private) and net investment—grew more slowly or declined more precipitously than production. According to official data (the only ones available), which on balance do not reveal fully the problems, domestic absorption declined absolutely in both 1981 and 1982, since 2% to 3% of output produced had to be transferred abroad both years to finance deterioration in the terms of trade and net debt service. In 1983 domestic absorption did not increase significantly. When the payments crises hit, an initial attempt was made at least to maintain consumption levels so that net investment (new fixed capital formation, unfinished construction and inventories) were cut by about 10%. But by 1982 significant cuts in total consumption could not be avoided, even though there was a further 10% reduction in net investment. Then 1983 saw a modest recovery in production but much of the increase still had to be transferred abroad to finance deterioration in the terms of trade with the USSR and as debt-service payments to the West. Consumption increased somewhat, but net investment continued to decline further.

D. Prospects for the Second Half of the 1980's

The good news revealed by recent trends is that East Europe has managed to make a substantial adjustment relatively quickly and decisively to deal with the BOP crisis. Thus, the probability of defaults on Western loans that seemed so worrisome in 1981-82—not only for the creditors but as a possible threat to the stability of the international financial system—has diminished. To be sure, East Europe's debt problems now seem behind us partly also as a result of the more serious debt problems elsewhere, notably in the Latin American countries.

But the fundamental economic problems of Eastern Europe were not solved by their impressive short-term adjustment. The two most important difficulties that continue to face them are the domestic political consequences of the reduced, stagnating or declining (depending on country) standard of living and their declining export-competitiveness.

Slow growth or stagnation in the living standards—which means that the consumption of certain groups must be declining, especially where the population growth is substantial—presents not only the usual problems that governments face in the West when economic performance falters, but additional ones unique to Communist countries. The superior economic performance of centrally-planned over capitalist economies is the main claim of the regimes for political legitimacy; in the West, the political system does not carry that kind of burden, although changes in governments may be triggered by poor economic performance. Moreover, whereas governments in the West can blame impersonal market forces for such ills as unemployment and inflation, governments in CPEs claim, and are perceived by their populations to be, fully in charge of the economic destinies of their nations. Only in Hungary and Yugoslavia have the authorities begun to retreat from this claim. A further aspect is that the new economic situation is undermining the implicit "social contract" in the region (Yugoslavia an exception): the population will not challenge the politics of the regime in return for significant improvements in the standard of living. What will happen to domestic political stability if the governments can not fulfill their part of the bargain?

Another key issue is: will East Europe be able to halt its loss of export competitiveness on the world market? The outcome will be an important determinant of their long-term economic performance. Prospects for improved export competitiveness do not appear favorable. During the 1970s, when East Europe imported Western technology on a significant scale, they were not able to narrow the "technology-innovation-marketing" gap vis-a-vis other nations, in fact, the gap may have widened [Gomulka, et al]. A comparison of East Europe's export performance with that of the group of "newly industrializing countries" (NICs) reveals the steady erosion of East European competitiveness in the OECD market for manufactures [Lenz]. The NICs have already technologically surpassed East Europe as exporters of steel, ships, passenger cars, and most consumer electronics, and may soon surpass East European levels of technology in the production of computers, complex chemicals, and other advanced products [Poznanski.] The main reasons are the systemic and policy barriers to the effective assimilation of Western technology, e.g., the foreign trade monopoly, poor planning of technology purchases, delays in plant construction, lack of domestic subcontractors, weak export marketing, barriers to foreign direct investment, and so on.

The future environment is likely to be even more difficult for East Europe for closing the "technology-innovation-marketing" gap. This is because:

—The significantly reduced levels of real investment is the main casualty of the lower growth and reduced tempo of domestic absorption. Therefore, the countries will have fewer investment resources than before to modernize the structure of production, especially since a larger share of investment will have to be devoted to secure energy from domestic sources. To be sure, East Europe still mobilizes a relatively large part of output for investment purposes as compared with most developed and developing countries, so that the problem of reduced levels or growth of investment could be offset by a significantly improved efficiency of their use. In fact, a lower level of investment may itself yield efficiency improvements by reducing the perennial excess demand.

—The reduced levels of imports and continued shortage of foreign exchange will not permit the importation of Western technology on the earlier scale. Therefore, poorer quality domestic and CMEA machinery and inputs will have to substitute for Western equipment and inputs;

—Increased competition will be faced on the world market, from the NICs especially, many with a competitive edge over Eastern Europe in terms access to Western technology, direct investment by multinational corporations, marketing know-how, labor costs, and more efficiently performing economic systems. Even developing countries with inefficient domestic arrangements will be forced by payment pressures to give high priority to exports, crowding the products of Eastern Europe.

—The Soviet Union, because of its own economic difficulties, has begun to adopt an increasingly tough stance on intrabloc economic relations: tighter supplies of "hard good" exports; smaller (if any) subsidies granted through the CMEA pricing mechanism, smaller (if any) net new loans, in fact requiring the servicing of the moderate-size loans outstanding; reduced willingness to spend hard currency to purchase "hard goods" from Eastern Europe; and stronger insistence on improved-quality and changed composition of manufacturers.[4] How far the Soviets will push East Europe is not clear (one of the issues that apparently has not been decided during the long years of leadership succession); the uncertainty this creates is one of the unknowns in trying to predict the economic future of Eastern Europe.

In this increasingly difficult domestic and external environment, instituting fundamental economic reforms holds out the best prospects for significant long-run improvements in performance. Reforms here do not refer to partial reforms designed to improve one or another aspect of the operation of a CPE system but to comprehensive, market-oriented reforms that shake-up the complacency and security of individuals as workers, managers and administrators. The essence of enduring reforms with significant payoffs must be to introduce much greater economic rationality into resource allocation decisions at all levels.

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[4] The Soviet Union appears to prefer the expansion of consumer manufactures, not machinery imports.

Barring the introduction of such reforms, East Europe's medium-term prospects are for modest growth in production and smaller increases in absorption owing to the continued net debt service burden and the prospective unfavorable developments in the external environment.

These broad generalizations about the seven countries of Eastern Europe must, however, be qualified by country-specific assessments of their main historical legacies, special circumstances, as well as the main system and policy issues. Each country has unique features that shed light on what happened in the recent past and influence significantly their prospects.

A brief overview of development levels and population trends in the region sets the stage for a summary of the main postwar economic and political developments in the individual countries. The purpose is to stress those important aspects of their heritage, economic policies, systems, and performance that are country specific. Nations comparable in terms of development levels and/or size and geographic location are juxtaposed: Czechoslovakia with the GDR, Poland with Hungary, and Bulgaria with Romania and Yugoslavia.

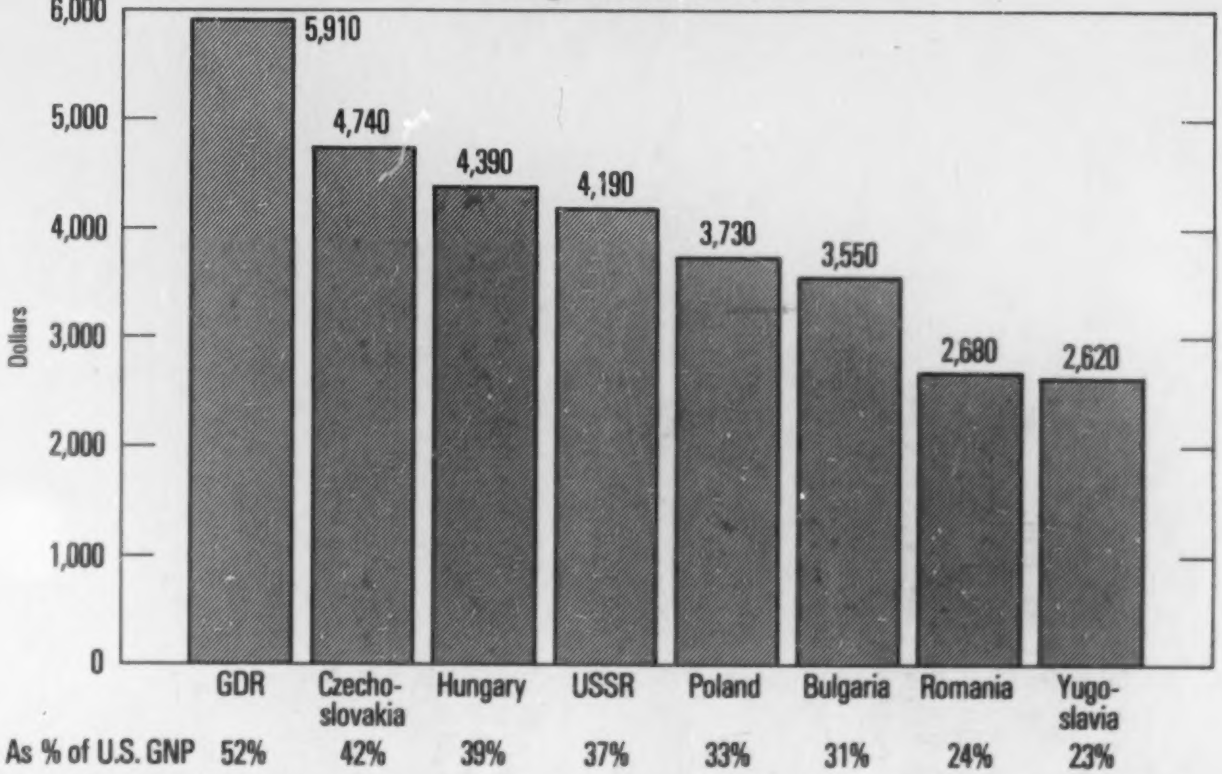
III. Development Levels and Populations

A. Per Capita Dollar GNP Estimates

Per capita dollar GNP is the customary statistic economists use to measure the development levels of countries. These are obtained by converting GNPs expressed in national currency units (NCUs) to dollars, using either prevailing exchange rates or purchasing power parity (PPP) estimates of the NCUs. Because exchange rates can swing widely during relatively short periods and also for other, more fundamental reasons, the two sets of convertors often yield very different estimates for countries, so there is considerable uncertainty about per capita dollar GNP statistics. PPP estimates are generally better for comparing income levels; but, regrettably, internationally comparable PPP estimates are available only for a few dozen countries, including only a few CPEs.

Chart 2.

Per Capita Dollar GNP of the U.S.S.R., Eastern Europe, and Yugoslavia in 1980



Source: Based on "adjusted purchasing power parity" except for Bulgaria and Yugoslavia for which their commercial exchange rate was used. See [Marer], Table 17 and text.

In the case of CPEs the problems are compounded by the fact that they calculate NMP not GNP (the former is a more restrictive concept of total production), but especially that most CPEs have no internationally comparable exchange rates or PPPs. In a recent project sponsored by the World Bank, a group of experts examined alternative approaches to estimate the per capita dollar GNPs of CPEs (Marer, 1984a). The results of what they identified as "best" (though not necessarily accurate, given the data uncertainties) estimates reveal that significant differences in development levels remain within Eastern Europe and between Eastern Europe and the industrial West (Chart 2).[5] The most developed country is the GDR, its per capita dollar GNP level is approximately twice that of Romania and Yugoslavia, but only about half of that of the U.S. (and about two-thirds of that of the Federal Republic).

B. Size and Growth of Populations

During 1965–82 the populations of the three largest countries, Poland, Yugoslavia and Romania, increased at nearly 1% a year, those of Czechoslovakia, Hungary, and Bulgaria much more slowly, while that of the GDR declined slightly. These demographic trends may help to explain certain policies and should be taken into account when interpreting performance. For example, countries with relatively rapid population increases are more likely to give high priority to increasing investment (as long as the BOP permits it) to create jobs for new entrants into the labor force. Demographic trends may in part explain why the GDR has been putting emphasis on the manufacture and introduction of robots.

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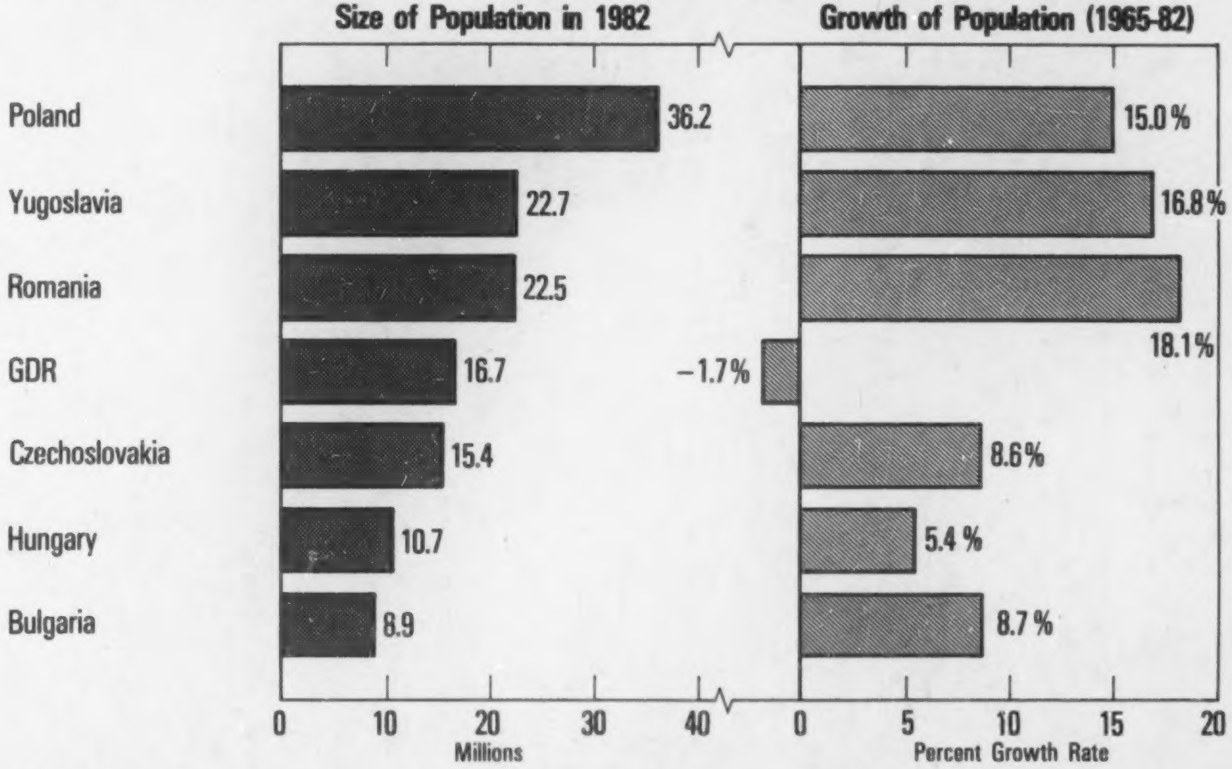
[5] Sponsorship of this project by the World Bank should not be interpreted that the results in any way be considered official figures of the Bank.

Chart 3.

Size and Growth of the Population of Eastern Europe and Yugoslavia



Source: Official data of countries.

IV. COMPARING THE COUNTRIES

A. The Industrial Heartland: Czechoslovakia vs. the GDR

1. CZECHOSLOVAKIA [6]

Czechoslovakia was one of the more industrialized countries of Europe when the CPE systems was introduced. Since much of the GDR's economy was destroyed during the war while Czech industrial capacity remained largely intact, during the first postwar decade Czechoslovakia became the chief supplier of manufactures, especially heavy industry products, in the CMEA. When East-West trade had begun to revive in the late 1950s and early 1960s, Czechoslovak products found a certain acceptance in Western and Third World markets. By the mid-1960s, however, shortcomings of the CPE system and policies caused a deceleration in the growth, in some years an absolute decline, of output. To be sure, the building up of parallel industrial capacities in the other East European countries and poor intra-industry specialization in the CMEA were contributing factors also.

During 1966–67 new leaders had begun to implement significant economic and political reforms. But the movement, known as the "Prague Spring," was ended in 1968 by the Soviet-led invasion of Warsaw Pact forces. At the beginning of the 1970s the traditional, highly-centralized directive planning and management system was reintroduced. Since then the country has been pursuing a dogmatic political and conservative economic course. It has continued to expand energy- and raw material-intensive heavy industrial capacity that increasingly yields costly and outdated products. The decline during the past 15 years of Czechoslovakia's international competitiveness has been striking. According to Czech sources, the share of products in the total value of production classified as being at "world technical and economic levels," already at a low 5% in 1970, declined to 2% by 1980. And whereas in 1970 some 27% of new products were still classified as suitable for foreign markets; in less than a decade the share of such products dropped to half of the earlier level [Levcik].

Czechoslovakia responded to the loss of export competitiveness on the world and regional CMEA markets first and foremost by constraining its hard-currency imports, to a lesser extent by borrowing from the West to finance imports. Although the country's 1980 hard-currency debt of almost $5 billion, with a debt-service ratio of about 25%, was substantial, relative to the size of its GNP and exports, its debt burden was the lowest in Eastern Europe. Consequently, Czechoslovakia was able to weather the credit crunch of 1981–82 without its economy spinning into a deep crisis, but the growth rate was relatively slow; negative in some years. Since 1979 its economic performance has deteriorated in ways and through the mechanisms described earlier, under general trends in Eastern Europe. (The official growth statistics presented in Table 1 do indicate trends but, cannot be relied on as an objective measure of performance.)

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[6] Based in part on [Levcik].

In the years to come, the conservative and cautious Czechoslovak leadership and the plodding Czech economy may well be able to avoid a headline-grabbing crisis. Yet, the country faces the prospect of a continued, steady erosion of its industrial base and a dispirited attitude of its work force; the two of course are not unrelated.

2. GDR

In the four decades since World War II ended, the GDR became the world's seventh largest industrial power, with a per capita GNP approximately two-thirds that of the FRG. This was accomplished even though the GDR's population is only one-thirds that of the FRG and is declining, even though much of its industry was destroyed during the war or carted away by the USSR, and even though its CPE system has major shortcomings. Within the CMEA East German products are considered to be nearly equal in quality to those available on the world market, though prospective Western buyers assess East German goods less positively. Although the statistics it publishes are scant and its growth indices upward biased, overall the GDR has to be credited with significant economic achievements.

The regime's decisions in domestic and foreign policy and in economic matters are strongly influenced by its competition with the FRG, whose political freedom, vitality, standard of living, as well as problems are well known to the East German people because of extensive direct contacts and the availability in the GDR of West German TV and radio broadcasts. In the political arena, the difficulties the East German regime faces are evidenced by the country's declining population, the Wall and all it stands for, and that several hundred-thousand East German citizens have applications pending to emigrate to West Germany even though the chances that permission will be granted are modest and declaring such intentions may have unpleasant consequences. This background indicates some of the pressures the GDR faces to assure that the standard of living will not fall too much behind that of West Germany; more generally, to assign high priority to economic performance.

The key ingredients in the GDR's comparatively good postwar economic performance are:

—A long tradition of German excellence in scientific and technical know-how, industrial discipline and work ethic—traditions weakened but not destroyed by the system of central planning;

—Introducing new methods of economic organization and planning; and

—Obtaining substantial economic benefits from its special relationship with the FRG, as compensation for the political burden that its proximity and links with the FRG create, including the six million visitors from the FRG who cross into the GDR each year [Bethkenhagen].

The contribution of the German scientific and industrial tradition needs no elaboration.

As to economic organization and planning, the GDR has been experimenting since the early 1960s to improve the CPE system. In 1963 a New Economic System (NES) was introduced, decentralizing some decisions partly to lower levels in the administrative hierarchy and partly to enterprises. Firms were instructed to rely on profitability to help guide some decisions. But NES was never fully implemented because it proved to be difficult to reconcile central and local decisions and because the 1968 events in Czechoslovakia discredited reforms, fearing their political consequences. Between 1970 and 1977 the number of enterprises was reduced through mergers from 12,000 to about 6,000. During the first half of the 1970s partial administrative decentralization was carried out, giving greater role to horizontal associations of enterprises (VVBs). Then between 1977 and 1980, practically all industrial and construction firms became subordinated to 226 (mostly) newly-created kombinats (trusts)—mammouth, vertically integrated organizations. It is not so much the size but the functions that make the kombinats unique inventions: they are simultaneously partners of the central planning organs in drafting the plan,[7] have the administrative responsibility to insure that the plans of subordinate enterprises are fulfilled, and are supposed to act as enterprenuers in charge of innovation, i.e., the introduction of new technology and products, reduction of costs and the expansion of hard-currency exports. To do all that, kombinats can allocate substantial R&D, investment and bonus funds, instruct enterprises what to produce, and may be granted independent foreign trading rights [Stahnke].

East Germany's economic experimentation and organizational reforms are characterized by what might be called "ideologically constrained practicality." An example is the use made of profitability. Since prices are fixed and do not reflect scarcity relations, and since enterprises must fulfill production quotas, telling firms to be profit-maximizers would not be appropriate. Instead, firms and managers that overrun planned costs are penalized, those with increased profits rewarded. Managers can affect profits largely by reducing inputs and costs; and by fulfilling all of the four new performance indicators, which are, net production, net profit, export, and production of consumer goods.

The East German economic system thus combines ideological orthodoxy with pragmatic experimentation that is kept within limits. Orthodoxy manifests itself in the high degree of economic centralization, the dominance of the plan and direct commands over market forces, and stubborn resistance to raising retail prices openly through inflation (though inflation by subterfuge is substantial). The regime's pragmatism is revealed by its economic experiments and its ability to fine-tune its relations with the FRG.

The special relationship the GDR has with the FRG, especially important since the late 1960s, provides it substantial economic benefits that flow through two channels: the commercial, involving intra-German trade, and the political, as a result of the Basic Treaty concluded in 1972 between the two Germanies [Garland]. The flows in the two channels are of course not unrelated.

The GDR derives unusual economic advantages from its commercial relations with the FRG because the trade has special legal status. Since the GDR is not considered a foreign country, imports from it are exempt from duty and agricultural levies. An interest-free credit facility is provided by the West German government to help finance the trade; its order of magnitude is about 10% of West German deliveries. Participating West German firms are granted tax concessions. If one considers also the benefits East Germany derives from its easier access to West German technology (because the controls on West to East technology flows, especially on invisible technology, are probably less enforceable in these relations), then the commercial benefits to the GDR, though not easily quantifiable, appear to be substantial. Let us assume, admittedly arbitrarily, but perhaps on the conservative side, that to East Germany those nonstandard commercial benefits are worth $500 million a year, or about 12% of its annual imports from the FRG.

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[7] For example, a traditional instrument of central planning is the material balances system (compulsory sources and uses of key inputs and outputs, prepared by the central planning organs). In the GDR, the Council of Ministers is responsible for preparing material balances for 376 products, the State Planning Commission for 674 products and the kombinats for 1,086 products. The sum of these represent 76% of the value of output.

The GDR also obtains substantial further value: consumer goods via the larger number of gift packages sent from the FRG to friends and relatives; hard-currency payments for services rendered to West Berlin; payments for allowing East German citizens to emigrate; visa fees and compulsory currency exchange requirements for visitors, payments for the improvement of roads to and from West Berlin; sales in hard-currency shops, and so on. The sum of the hard-currency receipts is estimated as $1.2 billion a year [Garland, 1984a]. If we reduce this amount--again arbitrarily—by $500 million to allow for costs the GDR incurs in connection with these arrangements, the net hard-currency gain is $700 million. Adding the estimated nonstandard commercial benefits the GDR derives from trading with the FRG under special arrangements ($500 million) and the volume of gifts to its citizens ($2-300 million), then the relationship may be estimated to yield the GDR about $1.5 billion a year. On an estimated $100 billion GNP,[8] this would mean a 1.5% "gift", which is that much more valuable because much of it is in hard-currency, a major bottleneck in growth. It must be stressed that this is a rough estimate, not a precise calculation. But even if the estimate had a 50% error margin, the conclusion would not change: the special relationship is economically very important to the GDR, and represents an advantage that no other CMEA country has, yet it alone cannot explain the GDR's relatively good economic performance

West Germany is willing to pay a price for the political benefits it derives: guaranteed access and services to West Berlin, increased contacts between the citizens of the two states, easing somewhat the humanitarian and economic lot of East German citizens for whom it feels some responsibility since the two Germanies are "one nation," and keeping alive the elusive long-term hope of reunification, since the FRG holds the view that improved relations between the two states is a necessary though not a sufficient condition to achieve it. There is a consensus, basically, between the two main political parties in West Germany regarding intra-German relations. Therefore, the initiative to cool or to warm those relations rests largely with East Germany; the events of 1982-84 seem to support this conclusion.

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[8] Population of 16.8 million times estimated per capita GNP of $5,900 [Marer-85]. Others estimate the GNP to be higher [Alton], which would lower the percentage of the estimate.

Throughout the 1970s, the GDR relied heavily on Western credits, in contrast to Czechoslovakia. Although the size of the two economies are comparable, Czechoslovakia had $5 billion and the GDR $14.4 billion of total debt by 1980. The GDR's creditworthiness was seriously impaired because exports were not keeping pace with the rapid expansion of debt. When it faced a payments crisis in 1982-83, triggered by the credit crunch after Poland and Romania had to reschedule, the GDR responded by introducing austerity measures, similar to those implemented elsewhere in Eastern Europe, and by strengthening its trade and financial ties with the FRG in exchange for ad hoc political concessions.[9] Although in 1983 less than 20% of East Germany's hard-currency debt was owed to West German creditors,[10] the timing of new credits and the fact that (according to OECD statistics) about 60% of the GDR's total trade with the industrial West is with the FRG today, it has become conventional wisdom in Western banking circles that the GDR's creditworthiness is protected by a West German credit umbrella.

During the 1983-84 the GDR took certain foreign policy positions that do not appear to coincide fully with those of the U.S.S.R. To what extent this is a tactic or a real change is difficult to judge. One interpretation that has been advanced is that at least initially, the Soviet Union may have encouraged improved inter-German relations because the more West Germany becomes tied to the GDR, the less likely it is to go along with future Western alliance policies that could jeopardize that relationship. If so, the Soviet Union appears to have had second thoughts, fearing where these policies may lead, and apparently prevailed upon the GDR leadership to cancel Eric Hoenecker's historic planned visit to the Federal Republic.

B. The Separate Roads of the Middle-Tier Countries: Poland vs. Hungary

1. POLAND

The basic dimensions of the Polish crisis—cumulating large hard-currency debts, inability to pay creditors on schedule, economic and political disorder, the imposition of martial law, and a 25% decline in output since 1978—are well known. Much less understood are the fundamental causes and consequences of the crisis. I concur with the view of one expert that the economic crisis in Poland was not caused mainly by labor unrest, unfavorable external conditions, or by the mistakes of this or that group of leaders, but by a combination of the basic problems of the economic system and the long-run consequences of a series of wrong decisions made by "the Stalinists in the 1950s, Gomulka and his planners in the 1960s, Gierek and his equipe in the 1970s . . . and Jaruzelski and his group since August 1980" [Fallenbuch].

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[9] Allowing more East Germans to emigrate or travel to the West, dismantling some of the weaponry facing the East Germans at the Wall, and easing controls on West German visitors.

[10] Not including loans from "offshore" West German banks, on which data are not readily available.

The basic features and policies of Poland's postwar economy can be summed up as follows.

During the first postwar decade, the traditional Soviet planning system and development strategy were transplanted to a country with vastly different size, factor endowments, culture, and historical tradition. In spite of much official talk about economic reforms, whenever the system and the policies led to a crisis, the basic features of a traditional CPE were never fundamentally altered (agriculture being a partial exception), even though Polish economists had pioneered proposals for comprehensive reforms in the region. Given Poland's long history of conflict with Russia and the national consciousness that the country's strong Catholic Church has provided, the people in Poland have been resenting especially strongly what they have perceived is an externally-imposed economic and political system. These essentially political constrants have made it more difficult for the leadership to cope with economic problems.

The industrial strategy was to duplicate Soviet industrial structure, stressing coal mining, iron and steel, heavy machinery and "heavy" chemical industry. Infrastructure; modern branches such as electronics, synthetic fibers, and plastics; agriculture; light industries; and the production of consumer goods generally, were neglected. Most new investment was heavily capital-, energy-, and material-intensive. Whenever the forced pace of industrialization culminated in a crisis, such as the 1956 and 1970, workers' riots, the forced pace of growth was slowed, some attention to consumer needs was given, and certain liberalization measures were introduced. But none of the changes involved fundamental reform in the system or in the industrial strategy pursued [Fallenbuchl]. In the early 1970s Gierek embarked on a new and ambitious economic development program simultaneously to modernize the economy and to increase living standards, in good part financed by foreign credits. But the scale of the investment program exceeded greatly the construction, input supply and skilled manpower capacity of the economy so that completion times and the number of unfinished projects increased greatly.

Since the late 1940s providing inputs and incentives for agriculture have been neglected, except for brief periods following crises. Although much of agriculture was decollectivized after 1956—hailed in the West as a significant liberalization measure—the private sector was not permitted to flourish. Disincentive agricultural policies, combined with maintaining artificially low prices on many food products in the face of inflationary wage increases, caused increasing shortages of food during the second half of the 1970s and forced Poland to become a large net agricultural importer. By the end of 1981 the net hard-currency deficit in the agricultural-food trade account was nearly $2 billion.

Gains from trade were generally not pursued. During the 1950s and 1960s only a minor role was assigned to foreign trade: produce and export coal to many destinations and meet Soviet demand for coal, steel, railway rolling stock, ships and heavy machinery. The traditional export sectors, based on agriculture, food and the light industries, were "decapitalized" and traditional foreign markets lost [Fallenbuchl]. Except for its CMEA specialization agreements, entered into without much attention to Poland's comparative advantage, until the early 1970s Poland pursued the most highly autarkic economic strategy in Eastern Europe. This resulted in producing a large number of low-quality manufactures with relatively backward technology and high unit cost. Gierek's "new development strategy" was to import capital and technology from the West to expand the production of modern, efficiently produced manufactures that would be exported to earn the hard currency to repay the loans. But his strategy failed [Fallenbuchl] because:

—The overall investment program was unrealistically ambitious, exceeding the capacity of the economy to implement it;

—The structure of the economy was much too unbalanced, with large gaps in infrastructure, subcontractors, and availability of secondary imports to permit efficient manufacturing;

—Poor investment choices in selecting and efficiency in operating new manufacturing capacity to become "winners" on the world market;

—The extreme politicization of economic decisions;

—Prolonged recessionary periods in the West.

One cannot stress strongly enough the contribution that the pervasive politicization of economic decisions has made to the crisis in Poland. While excessive politicization of economic deicisions is a problem in many societies irrespective of the political system, this problem became unusually pervasive in Poland. Projects with large Western import content were often approved by top politicians, overriding the recommendations of experts. I recall one case widely discussed in Poland: the sourcing of buses for mass transit in Warsaw. Although the experts advised against acquiring Berliez buses from France as inappropriate for Warsaw's harsh climatic, road and load conditions, Gierek reportedly decided personally to make the purchase. Subsequently, hundreds of broken down buses impaired Warsaw's mass transit system. Apparently, a decisive factor in resource allocation decisions generally was a particular manager's political or personal connections with a top decisionmaker.

The excessive politicization of economic decisions is also stressed by Western bankers. Initially they were under the impression that they were dealing with the government, but later they found out that they were dealing only with functionaries, that ultimate decisions depended on the relative strength, of competing political interest groups. Top leaders often confused reality with their hopes, intentions, and aspirations, and did not understand the economic consequences of decisions [Eichler]. The excessive politicization of economic decision, since the second half of the 1970s especially, was in good measure responsible for the planners losing control over wage increases, imports, investment outlays, pricing decisions, budget deficits, the growth of subsidies, and—these problems' their most visible manifestation—foreign debt.

During 1971–80 Poland obtained more than $38 billion in medium- and long-term credits from the West (gross of repayments so that the total is larger than the debt). Although the debt service ratio had climed rapidly to 100% and above by 1980 (which meant that if Poland were to make its scheduled payments and not take out new loans, there would have been zero hard-currency commodity export earnings remaining to pay for imports), few effective measures were taken to bring the debt under control. As long as new loans were available, the main response to the balance-of-payments pressure was to cut imports and push exports administratively, by themselves not real long-run solutions because of the production and consumption bottlenecks they created. It is worth noting that after 1978 it was not mainly the private banks, but Western governments that extended new credits or guaranteed private loans, so that today more than half of Poland's hard currency debts are owed to Western governments, a far higher share than for any other East European country (the Soviet Union excluded).[11]

Once new credits dried up, economic performance tumbled and Poland was forced annually to reschedule. To maintain essential economic relations with the West, in recent years Poland has been running a substantial export surplus to pay at least part of the interest.

Beset by strikes and demonstrations, facing a paralysis of economic administration and a disintegration of the party apparatus, by 1981 Polands economic administration and a disintegration of the party apparatus, by 1981 Poland's economic and political system simply collapsed and in December of 1981 martial law was imposed.

What about the future?

The outlook is not very encouraging in the short run, but one may be cautiously optimistic for the long-run. Today, Poland is in a very difficult situation, first and foremost politically. The great majority of its people place the blame for the difficulties not so much on any individual or group, but on the system. There is a fundamental lack of trust, with apathy and cynicism, toward the actions and pronouncements of the government, the party, and now the military. The attitudes are difficult for the authorities to change without fundamental reforms in the political and economic system, but such reforms face many difficulties. One constraint is that during the last 15 years Poland has become very dependent on the world economy: a significant share of its industrial capacity incorporates Western machinery that needs all kinds of hard-currency inputs; it also has large annual debt service obligations, even under rescheduled arrangements. The possibilities to reorient trade toward the CMEA are limited because the regional market for Polish goods is not expanding, but mainly because the USSR appears to be partly unable and partly unwilling to supply the imports Poland needs to break production bottlenecks [Fallenbuchl].

A further constraint is that a long-term recovery program would require large new investments—to restructure industry and to invest in infrastructure, agriculture and the service sectors—and fundamental reforms in the economic system to insure that investments and production would be efficient. Thus, although Poland badly needs substantial new, long-term foreign credits to support a reform program, neither the East nor the West—each for its own set of economic and political reasons—is likely to provide it.

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[11] Although the overly enthusiastic lending policies of commercial banks have been identified as contributing to the problem, since 1978 Poland's debts to the banks grew only because they refinanced what they were forced to, including a portion of the interest payments due.

The best hope for Poland would seem to lie in the introduction of far-reaching economic and political reforms. A viable economic reform probably would have to involve giving greatly increased scope to market forces. Incentives linked to economic performance would have to guide managers, workers, and farmers, letting only the relatively efficient prosper. Because such reforms would disturb vested economic and political interests, create (at least initially) unemployment, cause increased income differentiation, and even under the best of circumstances would take years to yield substantial economic payoffs (sooner in agriculture and the service sectors), it is not likely that they would be acceptable to the Polish authorities, or to Moscow.[12]

For the long run, one can be more optimistic because Poland has abundant natural resources, a highly skilled work force that can be motivated by the right kinds of rewards, a great deal of idle industrial capacity, and latent Western goodwill [Garland, 1986b].

2. HUNGARY

Poland and Hungary traveled a similar road until 1956, thereafter the policies of the two countries diverged.

After a period of extensive growth in the early 1950s, during which resources were mobilized at a forced pace and the economic and political excesses placed large burdens on the people, there was a shattering explosion: the Revolution of 1956. The uprising was ended by Soviet military intervention. János Kádár assumed and forcefully consolidated political power, then during the early 1960s begun a policy of gradual reconciliation between the regime and the people. This coincided with the more liberal policies of Khrushchev and those in several other East European countries. The difference between Hungary and the rest of the CMEA countries is that Hungary maintained its liberal course after the 1968 Czechoslovak invasion (with temporary reversals to be sure), while the other countries with significant reform movements—Czechoslovakia, Poland, the GDR and the USSR itself—stood still or changed course.

The Kádár policy of liberalization is summed up in his well-known phrase, "he who is not against us, is with us," a symbolic reversal of the slogan of his Stalinist predecessor, "he who is not with us, is against us."

More concretely, since the mid-1960s the regime had entered into an "implicit social contract" with the people. It enlisted the cooperation of the intelligentsia, giving it increased freedom to pursue its talnets and publically express its views; largely discontinued arbitrary arrests and secret police intimidation; allowed society to become more open in most respects than anywhere else in Eastern Europe; introduced major economic reforms and provided for gradual but significant improvements in living standards (halted in recent years by the BOP-induced austerity program). In return, the population is not to challenge the basic features of the political system. The party remains the ultimate arbiter of initiatives in the political and social realms. Methods of planning have been fundamentally changed. Planning focuses mainly on the macro sphere; its instruments are "economic regulators"—prices, incentives, exchange rates, taxes, etc.—not administrative directives.

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[12] In Hungary, the reforms have been introduced gradually, over a 20 year period, under more stable political conditions, and many further reforms will have to be implemented before the economic system becomes generally efficient (Marer-1984b). In Poland many of the reforms would have to be introduced all at once and in an unstable situation, making it more risky from Moscow's point of view.

The efficient operation of economic regulators requires a well-functioning market mechanism: significant competition and production guided by profits. The introduction of such a mechanism in an economy that has been operating as a traditional centrally planned system for almost two decades is exceedingly difficult. Even under favorable circumstances, it is a process that takes many years, although in some sectors, notably agriculture, it can be introduced and yield results more quickly.

Today Hungary is approximately midway between a traditional, Soviet-type CPE and an efficiently-operating, centrally regulated market economy.

The economic situation worsened considerably during the 1970s and early 1980s, in good measure because Hungary retreated from the reform path. By 1978 foreign debt reached such a level that the authorities concluded that high priority must be given to improving the trade balance to avoid eventual forced rescheduling. It was acknowledged that the 1973-77 attempt to insulate the economy from the adverse impact of world market developments was a mistake and that inefficiencies of the prevailing economic mechanism contributed importantly to the deterioration in the balance of payments.

The problem was attacked on two fronts: introducing economic austerity whose modest objective was to stabilize the debt level by the mid-1980s (the basic outlines of the program were similar to those pursued elsewhere in Eastern Europe, except that Hungary relied more on open inflation both to adjust relative prices and to limit domestic absorption), and beginning a new round of economic reforms to improve the efficiency of the system.

But events forced Hungary to accelerate the timetable of its austerity program. A severe financial crisis was triggered in early 1982 when Western, OPEC and CMEA banks pulled out short-term deposits, plunging Hungary into a liquidity crisis.[13]

Hungary was able to avoid rescheduling by (1) joining the IMF and the World Bank and obtaining substantial credits from these institutions; (2) tightening considerably its domestic austerity and import control programs; and (3) skillful financial management, e.g. floating the right kind of borrowing instruments, with propitious timing, and mobilizing the political and financial goodwill built up over the years with Western governments and banks.

After 1979 the leadership also returned the country to the NEM path and set the stage for further advance. Following a series of important partial reforms during 1979-84, Hungary plans to introduce a comprehensive set of new reforms during 1985-87 whose significance will rank alongside the historic NEM introduced in 1968 (for full details, see [Marer, 1984b]).

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[13] Although the immediate causes were the events in Poland and Romania and unfavorable developments in international finance and East-West political relations, the fundamental cause was allowing the gross hard-currency debt to increase from $1 billion in 1970 to $9 billion by 1980 and relying heavily on floating-interest loans Eurocurrency and short-term-funds—both potentially volatile sources of finance.

Why has Hungary been in the forefront of the economic reform movement in the CMEA? Certain generalizations can be made about the pressures for and constraint against reforms, but the outcomes are decided by circumstances that are largely country-specific.

The trauma of 1956 convinced many in the leadership that Stalinist political and economic institutions and policies should be changed as circumstances allow it.

Hungary is a small country, lacking the resources and internal market to pursue across-the-board, import-substitution industrialization a la the Soviet model. Sustained economic growth therefore depends on increased productivity and gains from trade. The traditional CPE mechanism is not well suited to generate either.

A certain period of political liberalization is highly conducive if not essential for meaningful reforms, for several reasons. First, open discussion of the economic problems and the reform options is essential and this has been possible in Hungary since the mid-1960s. Another prerequisite is the availability of comprehensive and reliable economic statistics. Only after 1956 was Hungary's century-old statistical tradition (itself important) re-established. Although there are still gaps, Hungary publishes the most comprehensive and reliable set of economic data in the CMEA. In many countries meaningful economic reforms are stifled by the absence of sophisticated economic understanding and by a statistical system that fails to disclose the real economic situation.

In Hungary, the leadership of Kádár—selected for the top post by the Russians who therefore presumably trust him—has certainly been important.

Hungary's economic reform and political liberalization process are becoming less and less reversible and are likely to continue after János. Kádár is no longer at the helm.

C. The Independent Ways of the Balkan Trio: Bulgaria vs. Romania vs. Yugoslavia

1. BULGARIA

The postwar and recent performance of the Bulgarian economy has been quite good. To be sure, Bulgaria publishes little comprehensive statistical information and its distorted prices and statistical methods impart a significant upward bias to its indices of economic growth. Even so, during much of the postwar period Bulgaria appears to have made economic policy decisions that were, broadly speaking, appropriate for its small size, resource endowment, extremely low initial level of development, and close political ties with the Soviet Union. Specifically:

—Gave strong emphasis in its growth strategy to agriculture and to the food industry and has pioneered the introduction of vertically-integrated agro-industrial complexes. These policies, and a soil and climate well suited for agriculture, helped to yield exportables that could be sold relatively easily on all markets. Bulgaria has poor energy and mineral endowment.

—Pursued a strategy of concentrated product specialization in industry as well as agriculture. Consequently, it was able to take advantage of economies of scale and technical specialization in production and trade. For example, it has become one of the world's largest producers of forklift trucks.

—Concentrated its trade with the USSR, which has consistently accounted for about 50% of its total trade, and with the other CMEA countries, representing an additional 25–30%, so that the share of the CMEA in Bulgaria's total trade is by far the highest in Eastern Europe. Trade with the USSR has provided stability because Bulgaria could count on Moscow for a relatively stable market, a steady supply of energy and raw materials, and financial assistance when needed to solve its hard-currency payments problem. In recent years this assistance has included allowing Bulgaria to re-export for hard currency a significant share of its favorably-priced crude-oil imports from the USSR (the only East European country that could to this). Since 1978 the dollar value of such re-exports has been estimate to have reached in some years one-half of the value of its exports to the industrial West. The economic benefits Bulgaria receives from the USSR are partly reciprocal, since Bulgaria also ships goods the USSR needs, partly a reward for political loyalty, and perhaps partly also quid pro quo for global services rendered.

—Outside the CMEA, its trade is heavily concentrated on LDCs, mostly in the North Africa region.

Although Bulgaria's trade with the industrial West is relatively small, by the mid-1970s it accumulated a large hard-currency debt and faced serious debt-servicing problems. But by cutting domestic absorption and obtaining Soviet help, by the end of the 1970s it decreased the debt to managable levels. Bulgaria thus faced and handled its balance of payments crisis earlier, and apparently more smoothly, than the rest of Eastern Europe.

In the early 1980s Bulgaria introduced certain "economic reforms." A key feature appears to be tying material incentives to income and profits rather than plan fulfillment. Little is known in the West about the details of the reforms and how implementation is proceeding. In any event, it is too early to judge whether Bulgaria's "New Economic System" represents simply modest adjustments or the first steps of what in the long run may turn out to be significant reforms in the system.

2. ROMANIA

It is interesting to contrast Romania's fundamentally different economic policies with those of Bulgaria, both Balkan countries that were approximately at the same level of development after the war. One similarity between them, however, is that neither publishes comprehensive statistics and that the official growth indices of both are strongly upward biased.

Romania's economy is characterized by:

—Good energy and raw material resources endowment.

—Policymakers giving relatively low priority to agriculture and the food sector. Romania has been able to generate significant agricultural and food exports by maintaining low domestic consumption of meat and other high-value food products.

—Pursuing a development strategy based on the rapid expansion of many heavy industrial branches, at the expense of light industry, the infrastructure, agriculture, and the service sectors. Consequences of this strategy include the lowest standard of living among the seven countries of Eastern Europe and inefficiencies in the industrial structure that hurts its competitiveness on the world market.

—Given the size of its economy and development level, Romania has built up an unusually broadly diversified production structure within heavy industry, and has attempted to become self-sufficient. But this structure has required rapidly growing imports of technology, components and other inputs, so self-sufficiency could not be attained. Romania has not been able to exploit economies of scale or technological specialization fully, so that many of its products are not sufficiently competitive on the world and regional markets. For a long time investment decisions were seemingly made without adequate regard for their balance-of-payments consequences.

Beginning in the early 1960s, Romania reoriented a significant part of its trade from the CMEA to the West, symbolizing its increasingly independent foreign policy. From the West Romania received trade concessions and, sooner than the other East European countries, financing also. In 1972 it became the first CMEA country to join the IMF and the World Bank, obtaining substantial resources from those institutions.

In sum, Romania's good growth performance during the 1960s and 1970s can be ascribed to its ample domestic energy and raw material resources, the large forced savings of its population, the availability of a substantial pool of new entrants to the industrial workforce (owing to the rapid increase in the population and reductions in agricultural employment), Western trade concessions, and large foreign credits. But its excessively-paced industrialization drive, especially serious deficiencies in its traditional CPE system, and such mistakes in economic policy as building a large petrochemical industry just when domestic oil production was declining rapidly (thus becoming dependent on high-priced imports whose costs could not be recovered through petrochemical exports), made Romania extremely vulnerable to adverse developments on the world economy. By 1981 it faced a serious external payments crisis, largely the result of earlier policies and decisions.

Although for years Romania had a reputation as a country often not meeting punctually its international commercial obligations, during 1981 it fell so much behind paying its foreign creditors that new credits—and for a time even the disbursement of approved IMF loans—were halted. In 1982 Romania became the second East European country to reschedule, its terms requiring it to run substantial trade surpluses, partly to settle arrears. Subsequently, its leadership decided to try to reduce the debt as quickly as possible. Imports were slashed (between 1979 and 1983 hard-currency import declined by 50%) and the exports of agricultural and other products were pushed. These policies contributed to significant deterioration in the already poor domestic food supply situation, leading to the introduction of food and then fuel rationing, and draconian decrees against hoarding. In many other areas, too, Romania's performance has deteriorated.

During the last few years Romania has made a large and painful external adjustment. Under more prudent leadership, the country's creditworthiness should not have been allowed to deteriorate as it did and the adjustments following rescheduling should have been spread over a longer period. Romania has good economic potential because it has significant natural resources, possibility to increase agricultural output, and a wide industrial base. Its greatest problem is poor leadership. One manifestation of this is the arbitrary nature of many economic decisions, more generally, a lack of professionalism that weakens all aspects of its scientific, economic, and political performance.

3. YUGOSLAVIA [14]

Although Yugoslavia's average level of development at the end of World War II was comparable to those of Bulgaria and Romania, three unique features make Yugoslavia not directly comparable with those or with any other country. First Yugoslavia has many and varied economic, linguistic, cultural, and ethnic differences among its peoples, who historically often faced each other in bloody conflicts. In terms of economic development, the northern part of the country was on the periphery of European industrialization before World War II and thus established an industrial and commercial base. The southern regions were characterized by traditional subsistance agriculture. These large inherited differences have made this artificially created country especially difficult to govern, a significant factor in the evolution—and evaluation—of its postwar economic and political system.

Second, in 1948 Yugoslavia broke away from Soviet domination and since then has maneuvered successfully to preserve its nonaligned status.

Third, Yugoslavia has created a unique economic system, "self-management," that is fundamentally different from that of any other system operating anywhere in the world. The reasons for its unique system have much to do with the country's two other distinctive features mentioned.

It is important to distinguish between the system of self-management as a theoretical construct and the economic system of Yugoslavia. Just as a single Western country's experience cannot be used to judge capitalism, the experience of the single historical context in which self-management has emerged should not be relied upon exclusively to judge the self-management system.[15] This is especially so because there is no single system of self-management in Yugoslavia, but an annual vintage [Milenkowitch].

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[14] I acknowledge with thanks that several issues in this section were clarified in discussions with Laura Tyson. Thanks are owed also to Deborah Milenkowitch for making available a prepublication copy of her excellent survey of the Yugoslav experience [Milenkowitch]. The conclusions and interpretations, however, are my responsibility fully.

[15] The distinction between self-management as theoretical construct and the Yugoslav system is explained clearly by [Milenkowitch].

Since World War II, Yugoslavia's economic system has evolved through four main phases.

(1) The Traditional, Soviet-type CPE System

This was introduced after the War voluntarily by the victorious Yugoslav partisans who looked to the USSR as a model. Tito's break with Stalin over the latter's attempt to dominate the country led to a Soviet-East European embargo. Yugoslavia then sought to introduce a non-Soviet-type economic system that would preserve the socialist ideals of its leaders and provide a mechanism for dealing with the divergent regional interests of its people.

(2) Limited Workers' Self-Management

A hastily designed new system was introduced to increase the legitimacy of the government as it stood up against the political pressure and economic blockade by Moscow and its allies. The details of production decisions were decentralized to enterprises where formal decision powers were vested in workers councils. Initially, workers' councils had little de facto authority to challenge managers; gradually, however, the institution of self-management within enterprises became more full developed. However, at this stage in the evolution of the Yugoslav system, the national leadership was not about to discard central planning. Its strong commitment to regional equalization required a central program to industrialize the south, regardless of the economic rationale of the resulting investment decisions. The center also remained determined to allocate centrally the large tax funds collected as a means of keeping local politicians in line. These considerations, and the national emergency created by the confrontation with the USSR and its allies, explain why, at this stage, the authorities were not giving up central planning. Investment and foreign trade decisions had remained fully centralized until the early 1960s.

(3) Market Socialism Self-Management

The Yugoslav constitution of 1963 and a series of economic measures between 1964 and 1967 (usually referred to as the economic reforms of 1965) reduced the economic role of the state and devolved much of the remaining state functions from federal to republic and from republic to local levels. Centralized investment allocation was discontinued, gradually, in favor of autonomous decisions by enterprises and banks. A considerably increased role was given to both self-management (that now also encompassed decisions about paid out and retained earnings) and market forces. However, the Yugoslavs have a different concept of the market than its description in standard textbooks in the West, as will be indicated.

(4) Self-Management by Basic Units

In the mid-1970s the system was changed for both economic and political reasons. The economic shortcomings of the existing system were identified, first, that it gave too much power to enterprise managers, bankers, and other "administrators," thus weakening self-management,[16] and, second, that "uncontrolled market forces" were causing excessive inflation and balance of payments pressures and led to unsatisfactory investment decisions. Perhaps more important was the political imperative to work out arrangements that would insure that Yugoslavia would remain unified after Tito. The solution was to extend the principles of self-management from micro- to intermediate- and macro-level decisions also, and to rely increasingly on the self-management principle and consensus to reach social and political decisions also. These principles were enshrined in the 1974 constitution and interpreted in a series of legislative acts during 1974–78 on economic organization.

To resolve the potential conflict between the large size of enterprises and effective self-management, separate economic units, Basic Organizations of Associated Labor (BOAL) were established. A BOAL is the smallest operating unit that produces a marketed or marketable output. An enterprise is simply the voluntary association of BOALs, linked through contractual relations based on mutual self interest. Banks are not autonomous financial intermediaries but financial cooperatives formed by groups of enterprises, with whom they do not, therefore, have an arms-length business relationship.

What does self-management planning mean and what is the role of the market in this system? Let's consider both the formal and the actual resource allocation mechanisms, first for goods and services and then for factors of production.

Self-management agreements formally regulate almost all transactions within enterprises (that is, between its BOALs) and between firms. The agreements are reached through self-management planning: BOALs as well as enterprises draw up their planned outputs and required inputs for the coming period. This information must be exchanged with the relevant other enterprises, financial institutions, and government bureaus. Formally, the iterations proceed until the plans become synchronized, at which point they are codified into binding contracts. The contracts resemble market-type transactions in that they are supposed to bind the parties to supplier-customer links for extended periods, usually five years or longer, for specified quantities, at prices or pricing formulas agreed upon. Contracts and prices may incorporate non-market considerations.

Actual practice often deviates from this formal structure. In particular, many important planning issues are never synchronized; even when they are "binding," self-management agreements may be disregarded in practice. Perhaps the most significant outcome of the new system is that it has increased republic and local administrative intervention in (1) investment allocation decisions at the expense of enterprises and banks and (2) foreign exchange allocation decisions at the expense of the National Bank.

To provide social services (e.g., education, health), public utilities and other public goods, Communities of Interest (COI) were created at republic and local levels. This means that those who supply, use, and pay for the goods and services involved, negotiate all decisions. Operations are financed through earmarked local taxes or contributions.

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[16] Some observers have noted that the reforms were motivated by concern that the existing system gave too much power to managers at the expense of the party, not as publically stated, by concern that managers were gaining power relative to workers.

Social compacts are negotiated between elected or designated representatives of various economic, political and social groups to decide on such macroeconomic issues as inflation targets, the distribution of income within enterprises and BOALs, policies to increase social-sector employment, the allocation of foreign exchange, the development of small-scale industry, encouragement of the growth of the private sector, and so on, and to establish the obligations of the relevant economic units. Social compact negotiations are thus conducted over issues that in most countries are managed by the central government. Once the general targets at the intermediate or macro level have been agreed to and the principles of how they are to be decomposed decided, the resulting social compacts become law. At the local level social compacts are either implemented directly or serve as guides for signing self-management agreements.

The market alone controls supply and demand relations for goods and services not covered by one of the other agreements. Letting the market do the allocation basically means that delivery relations are free; prices may or may not be administered; even when they are, market pressures are reflected.[17] The Yugoslav price system has been characterized as being generally flexible upward, so that it can usually eliminate excess demand, but inflexible downward, so that excess supply is not easily corrected.

For factors of production—land, labor, capital, and foreign exchange—most Yugoslav politicians apparently don't believe that a free market should be operating, for ideological and political reasons. As far as labor is concerned, in public-sector enterprises, workers do not receive wages or salaries but share in the residual income (gross revenue less inputs, depreciation and taxes). The basic guidelines for income-sharing are set by the social compacts negotiated at the federal level, but they vary from year-to-year in terms of what is specified and what is not. For example, maximum wage increases may or may not be given. Since remuneration differs by skill, region, sector and enterprise, the various agreements governing personal incomes incorporate some supply and demand considerations. But job creation remains a major problem because workers manage to keep wages high and make firing of the employed an impossibility.[18] As a partial solution to the resulting employment problem, each region determines its own target for increasing public-sector employment and enters into a social compact with its enterprises specifying what proportion of new investment is to be devoted to generate new jobs rather than to deepen the capital stock to raise labor productivity. One outcome of this system is that the marginal product of labor varies widely between enterprises, sectors and regions, with obvious adverse consequences for efficiency.

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[17] When prices are administratively controlled, as for many basic goods and services, the difference between the controlled and the free market price must be reimbursed to the producer by the relevant sociopolitical unit.

[18] Experts do not agree fully on how best to characterize the motivation ("objective function") of enterprises: whether it is profit-maximization, earnings-per-worker maximization, or something else altogether. The answer depends largely on how enterprise decisions are made. Recent empirical work suggests that managers make most decisions, save for those on worker issues, such as allocation of jobs, housing, and fixed wage payments (in contrast to variable payments that depend on end-year profits). If so, this is consistent with a profit-maximizing approach. (These findings were explained to me by Laura Tyson.)

Investment decisions are made by a procedure. Its formal steps are: first, each enterprise, bank, sociopolitical unit in each republic and region identifies priority sectors and projects, largely on the basis of physical output and capacity targets. Next, social compacts are concluded following a series of iterations to identify priority sectors [19] and projects and to specify the obligations of the affected sociopolitical units and enterprises (including the financing arrangements). Subsequently, the social compacts are defined in greater detail in self-management agreements between and within the enterprises. These agreements are binding for the banks that are subordinated to the enterprises that founded them. In practice, many social compacts on the allocation of investment among and within priority sectors are never signed because of political disagreements, especially between the regions.

One of the most striking and important aspects of the Yugoslav capital market is that the real rate of interest has been negative for years. This appears to be not simply a poor policy decision, but mainly the outcome of the Yugoslavia's politically-determined economic system. Since the losses of social-sector enterprises are underwritten automatically by the banks and pooled "solidarity" funds, which in turn are financed by an accommodating monetary policy of the National Bank (pressured not to restrict credit so as to avoid excess capacity and bankruptcies), there is insufficient incentive to be concerned too much with the profitability of proposed projects in both the priority and nonpriority sectors.

Foreign exchange policies are formulated by the Federal Assembly (a political body); a key input is the BOP projection prepared by the Yugoslav Community of Interest for Foreign Economic Relations (CIFER), representing the self-managing CIFERs set up in each republic and autonomous province. The projection contains the mutually negotiated social compact plans for the balance of payments of the republics and autonomous provinces, as well as the foreign exchange expenditures and revenues of the Federation. On the basis of uniform criteria prescribed by the Federal CIFER in a social compact with the regional CIFERs, the latter conclude self-management agreements and prescribe policies to be followed by the economic units in their region to achieve the agreed balance of payments projections. The basic principle of foreign exchange rationing is that it should be shared on the basis of the contribution that each republic or autonomous province makes toward earning it.[20] Thus, in effect, each region is responsible for its own balance of payments. As a result of the debt crisis that brought the country to the brink of default by 1983, at the insistence of the IMF and other creditors, the republics finally agreed to allow the Federation to retain a specified share of foreign exchange earnings by enterprises to help meet national debt repayment obligations. Only then was the debt rescheduled and significant new funds provided.

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[19] Priority investments absorb more than half of the total investment resources of the economy, the rest are financed either by retained earnings or bank loans.

[20] Given the increasing payments pressure Yugoslavia has been facing, especially since the late 1970s, increasingly complicated devices have been used to ration scarce foreign exchange to enterprises. A portion is allocated through trade or foreign exchage quotas at the official rate, the rest through complicated arrangements at more or less freely negotiated rates between buyers and sellers. The coexistence of both modes of rationing mean that different users of the same imports may pay different prices.

From the point of view of resource allocation efficiency and the timely implementation of macroeconomic policies, the economic system just outlined leaves a great deal to be desired. The most important inefficiencies are:

—Since regional plans form the heart of the planning system, there is much less than the optimum volume of inter-regional trade and very little inter-regional movement of the factors of production. Enterprise sourcing of inputs and marketing or output tends to be restricted to a particular republic or province. Since through the system of self-management agreements, firms are able to secure assured markets at the local or regional level, they tend to forego the economies of scale that would be possible by greater inter-regional and international specialization. There are no transregional enterprises since it is at the regional level that concrete projects are conceived and funded. Thus, an enterprise that needs intermediate inputs will tend to build a factory to produce them in its own republic, where it will find it easier to secure investment funds, rather than in another region where it will lack representation in the banking system and planning agencies.

—Financial intermediation between enterprises, sectors, and regions is constrained by the negative real rate of interest. Since financing at a negative rate contains a grant element, enterprises, banks and local governments with investible funds prefer to use these for themselves or for local clients, causing the emergence of inefficient "political factories" and the duplication of facilities among the republics. In agriculture, too, each region seeks self-sufficiency in many products. The system thus has increased the politicization of investment decisions and has aggravated rather than ameliorated regional conflicts about the fair distribution of investment funds.

—Labor mobility is hindered not only by linguistic, ethnic and cultural differences, but also by the system and the policies pursued. Since each region targets its own employment growth rate and implements its plan through the system of social compacts described, there is no assurance that the employment policies of regions better endowed with capital will open jobs for workers from the less productive regions. This is especially so since the criteria for employment may include the length of waiting time on the local employment register, so for this reason, too, locals get preferential treatment. Barriers to inter-regional mobility help explain why labor migration to Western Europe has been very important.

—Job creation generally is hindered also by workers keeping wage rates high and practically preventing dismissals.

—Inefficiencies in the economic system have contributed significantly to Yugoslavia's growing macroeconomic instability. For example, negative real interest rates and the "soft budget constraint" artificially stimulate investments and depress savings. While theoretically it is possible to ration investment demand within the limits of available savings, in practice this has not worked. Instead, excessive investment expenditures have tended to stimulate increases in domestic credit, adding to inflationary pressures, which spill over into foreign borrowing, contributing to the rapid increase of the hard-currency debt. Moreover, the system of long-term social compacts and self-management agreements, and the regional orientation of production and investment decisions, have tended to promote import substitution and overlook export promotion.

—The organization of the Yugoslav banking system is so decentralized that until the crisis in 1983 forced some changes, there was no effective mechanism, for example, to allocate foreign exchange earnings from one bank or region to other banks or regions that had to meet foreign payment obligations. This in turn had contributed to delays in settling the international liabilities of certain banks, impairing seriously the creditworthiness of the country.

—The persisting overvaluation of the dinar and the administrative allocation of foreign exchange associated with it blunted incentives to exports and helped stimulate the growth of inefficient import-substitution industries.

—A further serious problem is the greatly increased difficulty of making macroeconomic decisions on a timely basis because decisions require unanimity of the representatives of regions. Since the impact of macroeconomic policies differ from region to region, disagreements about policy—which cause difficulties in any country—have by and large paralyzed Yugoslavia during the last decade. Until the cost of holding out becomes greater than the cost of compromise for each participant in the decision, there is little incentive to agree. The cost of holding out typically becomes greater only when failing to do so would trigger a crisis [Milenkowitch].

The conclusion many have reached is that the latest version of Yugoslavia's self-management is not an efficient resource allocation system. The main contribution to the system (other than its pioneering nature) is that it provides a pragmatic political approach to building a national consensus where it can be found and relies on local self responsibility in all other cases. This rather pessimistic assessment of the economic efficiency of the system is echoed by many Yugoslav experts; others would not endorse it. Among the former is the Federal Planning Institute of Yugoslavia, which has noted recently ([Yugoslavia], p. 152) that the country's industrial development has progressed haphazardly, owing to the poor selection and evaluation of capabilities, the parallel construction of facilities, high production costs, high prices, lack of competition in domestic and foreign markets, lack of clear and consistent criteria in the allocation of foreign exchange and investments, lack of a long-term export strategy, among other factors. These problems have contributed to a decline in Yugoslavia's international competitiveness and to its debt-servicing problems.

One conclusion is that the economic system and policy choices are inextricably linked in Yugoslavia, more so than elsewhere in

Eastern Europe. The latest version of self-management was introduced in 1974, just at a time when a series of external shocks would have required decisive domestic responses. Until 1980, Yugoslavia's policy response was inadequate and involved mainly increased quantitative restrictions on imports. These had a tendency to re-enforce the micro inefficiencies and macro problems noted. Only after 1980 did Yugoslavia introduce an austerity program. Although the deficit in its balance of trade declined significantly as a result, given its large debt ($20 billion, on a per capita basis larger than Poland's) and increased foreign interest rates, rescheduling could not be avoided.

In 1982 a blue-ribbon commission was appointed to assess the economy and to make recommendations. During 1982–83 the Kraigher Commission issued a series of reports. The thrust of its recommendations is to create a more unified market economy and to implement a series of reforms to increase economic efficiency. The Yugoslav government has endorsed these recommendations. If they are to be implemented, a significant new stage—the fifth—will have been reached in developing the Yugoslav economic system [Burkett].

A discussion of Yugoslavia would not be complete without also acknowledging its impressive postwar economic achievements under very difficult internal and external circumstances: high growth rate, high rates of investment, and significant increases in total employment and in the standard of living. Among the main problems are a backward agriculture, high unemployment rates, persistently high and recently accelerating inflation (currently about 50% per annum); and continuous pressures, occasionally crises, in the hard-currency balance of payments.

One of the fundamental goals of postwar economic policy was the promotion of a faster rate of growth in the less developed regions to equalize economic conditions and to reduce the possible basis for inter-regional conflict. This policy has been implemented through significant federal transfers of resources from the more to the less developed regions. But in spite of the transfers, the less developed regions have grown at about the same rate as the more developed ones. The much higher rates of population growth in the South, however, caused the gap between regional per capita outputs to widen: the per capita output in Slovenia is about seven times greater than that in the Kosovo region. The principal constraints on reducing regional income differentials have been the systemic and institutional arrangements of Yugoslavia's self-management system, although these in turn were adopted precisely because large economic, ethnic, cultural, and historical differences prevented forming a national consensus on alternative arrangements.

Yugoslavia is an exciting experiment with a great potential. The country has vitality that could be channeled to realize its potential if the causes of the most serious economic deficiencies could be eliminated. The uncertainty is whether the political framework will permit it.

V. CONCLUSIONS

The most important economic issue for the seven countries of Eastern Europe is their severe hard-currency BOP problem. There are important similarities but also significant differences between them in the reasons that gave rise to the problem and in the way they have chosen to try to resolve it.

The main commonality is that in all countries the shortcomings of the economic system, mistakes in economic policy, and adverse developments in the external environment contributed to the problem, although the relative importance of each factor has varied. The main systemic shortcomings are the wasteful use of imports, insufficient incentives to increase hard-currency exports, and in some countries, the excessive politicization of economic decisions. The main policy mistakes were pursuing excessively high growth rates, especially of investment, giving much greater attention to import substitution than export promotion, and neglecting to adjust the structure of production to changing demand conditions on external markets. The main external causes have been the deterioration in the terms of trade that has affected more their trade with the USSR than with the West; sluggish demand in Western markets for their goods; increased competition from LDCs, especially the NICs; large increases since 1979 in the real cost of Western credits; the credit squeeze of 1981–82; and the reduced ability and willingness of the USSR to supply "hard goods" and its growing insistence to be supplied with new kinds of imports.

There are similarities as well as differences in the way the countries have dealt with their BOP crises. The main commonality is that initially they tried to solve it mainly by cutting imports; when that proved to be insufficient, they reduced domestic absorption also. Because regimes have tried to protect the standard of living, investments were slashed considerably, but as the crisis deepened, in most countries significant cuts in consumption could also not be avoided. We find notable differences in how the countries reacted when the problem reached crisis proportions (to some extent, these also reflect differences in the intensity of the crisis):

Three countries were forced to reschedule, but with important differences. Poland waited too long, until it had no choice in the matter, and rescheduled each year since 1981 in the midst of chaotic domestic conditions, each time trying to work out the best arrangements for the short-run. The country does not seem to have a long-term strategy because of the short-term horizon of its uncertain leadership. Romania shared many similarities with Poland until its crisis peaked; thereafter it decided to reduce the debt quickly, sacrificing a great deal in the domestic eonomy to hold to that course. Neither country obtained significant new credits during rescheduling. Yugoslavia's rescheduling was more orderly and took place with the infusion of substantial new credits, in part reflecting Western consensus that helping to stabilize Yugoslavia's economy is a way to help it preserve independence.

Three countries helped to extricate themselves by tapping special relationships forged over the years. Bulgaria obtained assistance from the USSR while the GDR was helped by the FRG. Hungary turned to the IMF and the World Bank and to the Western financial community to obtain bridge financing at a time when new credits were not generally available to East Europe.

The debt burden of Czechoslovakia was not so substantial as to force the country into an immediate payments crisis.

During 1979–83, all seven countries improved significantly their hard-currency trade balance primarily by cutting imports.

East Europe's severe payments crisis dispelled once and for all the conventional wisdom that CPEs can control fully their BOP. The crisis has also shown that there is no all-encompassing Soviet credit umbrella over Eastern Europe, although the umbrella may be opened to provide some protection to some countries under some circumstances. The crisis and response also underscored that the East European countries should not be treated as a bloc, undifferentiated.

One commonality is the realization by the East European countries that reforming their economic system is desirable. But there are significant, country-specific differences in the outcomes of the pressures that promote and constrain the reform process. Reform outcomes are shaped by foreign and domestic policy considerations; the ideological commitment of the leadership as well as their personality and age (old leaders tend to have short time horizons, not conducive to basic reforms whose payoffs are long term); the country's historical tradition; size, natural resource endowment, and importance of foreign trade; quality of economic understanding of its experts and the reliability of its official statistics. Surely there are also other factors.

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